VAJIRAM & RAVI
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ART & CULTURE

➢ **India's National War Memorial**

- The memorial unveiled is located at the **India Gate complex** in New Delhi, and **is built to honor soldiers who laid down their lives defending the nation, post-independence.**

- The layout of the structure comprises **four concentric circles**, namely:

  ▪ **The "Amar Chakra" or Circle of Immortality:** It has a hollow centre where the eternal flame is situated.

  ▪ **The "Veerta Chakra" or Circle of Bravery:** depicting Battles of Gangasagar, Longewala, Tithwal, Rizangla, and Operation Meghdoot (1984), Trident(1971).

  ▪ **The "Tyag Chakra" or Circle of Sacrifice :** dedicated to soldiers who fell in China and Pakistan wars and operations such as that of the Indian Peace Keeping Force in Sri Lanka.

  ▪ **The "Rakshak Chakra" or Circle of Protection:** comprising of 600 trees symbolises soldiers who ensure the territorial integrity of the nation, round the clock.

- **The Param Yodha Sthal** has the **busts of 21 recipients of the Param Vir Chakra**, India's highest military honour, with short descriptions of their acts of valour.

➢ **Tagore Cultural Harmony Award**

- The award was given to **Shri Rajkumar Singhajit Singh** (scholar of Manipuri dance), **Chhayanaut** (a cultural organization of Bangladesh) and **Shri Ram Sutar Vanji** (a renowned sculptor) for the years 2014, 2015 & 2016 respectively.

- The Tagore Award for Cultural Harmony was instituted by the Government of India from 2012 recognizing the contributions **made by Rabindranath Tagore to humanity at large with his works and ideas, as part of the Commemoration of his 150th Birth Anniversary** in 2012, for promoting values of Cultural Harmony.

➢ **The Dard Aryans of Ladakh**

- Some 200 km from Leh are the villages of Dha, Hanu, Garkone and Darchik on both sides of the Indus River, inhabited by **Buddhist Dard Tribes**. The villages are together **called "Aryan valley".**

- The people of this region are culturally and linguistically different from those in other parts of Ladakh, and have been **accorded the status of Scheduled Tribes (STs)**

- They rear goat and sheep for milk and meat, and their festivals are based on the solar calendar and **worship trees, rivers and mountains.** The tribe is struggling to find a balance between modernity and traditional values.

- They have demanded that the government set up a tribal hostel and declare the "**Aryan valley" a heritage village to boost tourism.**

➢ **MHRD takes immediate steps to implement recommendations of committee for the Promotion and Protection of Maithili Language and its script**

- It has been decided to take **immediate action** on **some of the recommendations of the committee as follows**:
- To establish a **Script and Manuscript Centre at Darbhanga**.

- Early completion of the work pertaining to **Unicode Scripts of Mithilakshar by Technology Development of Indian Languages (TDIL)**.

- To prepare **audio-visual teaching materials** for teaching the **Mithilakshar** scripts.

Mithilakshar or Tirhuta is the script of broader cultural Mithila. The scripts of Mithilaksar, Bangla, Assamese, Nebari, Odia and Tibetan are part of the family. **Mithilakshar had come to its current shape by 10th Century AD. The oldest form of Mithilakshar is found in the Sahodara stone inscriptions of 950 AD**.

➢ **The 'Titanwala Museum' in Bagru, Rajasthan inaugurated to preserve the art of traditional Bagru block printing.**

- **Bagru block Printing** is a traditional technique of printing with natural colour done by the **Chippa community in Bagru village of Rajasthan.**

- **Motifs** printed at Bagru are **large with bold lines**. The motifs include **wild flowers, buds, leaves and printed geometrical patterns .Colours used :red and Black**

Block printing is a form of **dying and coloring a fabric using wooden blocks**. India is one of the largest manufacturers and exporters of block printed fabric in the world. Block printing craftsmen use wooden or metal blocks to create beautiful designs; sometimes, linoleum blocks are also used. Popular prints of India include: **Bandhani, Patola, Batik,Ikat,Ajrakh,Kalamkari,Dabu,Bagru.**

➢ **Haj Pilgrimage**

- India is likely to overtake Pakistan in terms of number of pilgrims sent for Haj pilgrimage this year

- There are two Islamic countries – Indonesia, from where around 2 lakh people participate and then there is Pakistan from where 1,84,000 people participate.

- The pilgrimage to holy city of **Mecca in Hejaz region of Saudi Arabia** is a religious obligation that every adult Muslim with the ability and means must fulfil at least once before the end of their life.

- What makes the journey so important is that it replicates the steps of the **Prophet Muhammad** from over 1,400 years ago.

➢ **Abu Dhabi includes Hindi as third official court language**

- In a landmark decision, Abu Dhabi has included Hindi as the third official **language** used in its courts, alongside Arabic and English, as part of a move designed to improve access to justice.

- This is aimed at helping Hindi speakers to learn about litigation procedures, their rights and duties without a language barrier, in addition to facilitating registration procedures via unified forms available through the **ADJD(Abu Dhabi Judicial Department) website**.

- The adoption of new languages comes as part of the bilingual litigation system, the first phase of which was launched in Nov 2018, through adoption of procedures requiring the plaintiffs to translate the case documents in civil and commercial lawsuits into English, if the defendant is a foreigner.

➢ **Ghumot to be Goa's heritage instrument**

- **Ghumot, Goa's indigenous traditional percussion instrument** made from an earthen vessel, will be notified as a heritage instrument of Goa, Art and Culture.

- The instrument was banned due to the use of the skin of the endangered monitor lizard for the drum membrane. In recent years**, ghumot makers have started using goat skin instead.**

- The ban is applicable to the use of any animal listed in the **Wildlife (Protection) Act, 1972**, and that the goat is not one of them.
- It is part of **the Mando, a musical form of Goan Catholics** that combines elements of both Indian and Western music. It is also part of the **Zagor folk dance and Dulpod** (**Goan dance song**).

➢ **Attukal Pongala 2019**

- Attukal Pongala is a 10-day festival celebrated at the Attukal Temple, Thiruvananthapuram, Kerala, India, during which there is a huge gathering of millions of women on the ninth day**.**
- These women prepare a divine food made of rice in earthen pots & offer it to Goddess of Temple**.**
- **The festival is marked as the largest annual gathering of women by the Guinness World Records. This temple is also known by the name Sabarimala of women.**

➢ **Cultural Heritage Youth Leadership Programme (CHYLP)**

- The scheme for **Cultural Heritage Youth Leadership Programme (CHYLP) envisaged enriching awareness of Indian culture and heritage** amongst the youth in order to promote, understand and develop fondness for India's rich cultural heritage, with a view to develop appropriate leadership qualities amongst youth.
- The **focus of the programme was to be on less privileged children residing in backward areas by interacting with them in vernacular languages** for their better understanding.
- Intermittently programme was given to **Centre for Cultural Resources and Training (CCRT)**, an autonomous organization working under Ministry of Culture. Museum division is also involved.

➢ **Dictionary for Martyrs**

- PM Narendra Modi recently released *the Dictionary of Martyrs of India's Freedom Struggle.*
- The aim is *to nurture and recall the brave deeds of the heroes of our freedom struggle*.
- The project for compilation of "Dictionary of Martyrs" of India's Freedom Struggle was *commissioned by the Ministry of Culture, to the Indian Council of Historical Research (ICHR) to commemorate the 150th anniversary of uprising of 1857*.
- In this dictionary a **martyr has been defined as a person who died or who was killed in action or in detention, or was awar**ded capital punishment while participating in the national movement for emancipation of India.

➢ *Maharshi Badrayan Vyas Samman' Awards*

- Vice President recently conferred around 100 *'President's Certificate of Honour' and 'Maharshi Badrayan Vyas Samman' Awards* to scholars in Classical Languages.
- The Maharshi Badrayan Vyas Samman distinction is conferred on persons *in recognition of their substantial contribution in the field of Sanskrit, Persian, Arabic, Pali, Prakrit, Classical Oriya, Classical Kannada, Classical Telugu and Classical Malayalam*.
- ✓ **Introduced in the year 2002**.
- ✓ **Given to selected young scholars in the age group of 30 to 45 years**.
- ✓ **Carries a certificate of honour, a memento and a one-time cash prize of Rs.1 lakh.**

SOCIAL ISSUES

EDUCATION

➢ **Constitution of Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities**

- **Setting up of a Committee under the Chairpersonship of Vice-Chairman, NITI Aayog** which will complete the process of identification of the Denotified, Nomadic and Semi-Nomadic Communities (DNCs) that have not yet been formally classified.

- The Government has decided **to set up a Development and Welfare Board** under the **Societies Registration Act, 1860** under the **aegis of Ministry of Social Justice and Empowerment** for the purpose of implementing development and welfare programmes for Denotified, Nomadic and Semi-nomadic Communities.

➢ **Decide guidelines to define 'minority' in terms of State population, SC tells minorities commission**

- The Supreme Court asked the **National Commission for Minorities (NCM)** to take a decision on a plea seeking **guidelines for defining the term 'minority' and for their identification State-wise.**

- **Central government through its 1993 circular notified only five communities — Muslims, Christians, Sikhs, Buddhists and Parsis** — as 'minority' community, without defining 'minority' and framing parameters for the identification of minority.Later Jains were added to this List.

- Christians are a majority in Mizoram, Meghalaya and Nagaland and there is significant population in Arunachal, Goa, Kerala, Manipur, Tamil Nadu and West Bengal but they are treated as minority.

> **Supreme Court through its various judgements has tried to provide guidelines for defining minorities .**
> - ✓ **Kerala Education Bill case 1958:** It said minority should to be a group of people who are numerically a minority in a 'State as a whole' as distinguished from any particular area or region'.
> - ✓ **Bal Patil & others v UOI, 1999 and TMA Pai Foundation v State of Karnataka 2002:** It held that with regard to state law, the unit to determine a religious or linguistic minority should be the state

➢ **Operation Digital Board (ODB)**

- The **Ministry of Human Resource Development** launched **Operation Digital Board** to leverage technology in order to boost quality education in the country and make the learning as well as the teaching process interactive and popularize **flipped learning** as a **pedagogical approach.**

- The digital board will be introduced all over the country in government and government-aided schools **from class 9 onwards as well as in higher education institutions. ODB aims at converting a class room into a digital class room**

- **Flipped Learning:** It is a **pedagogical approach in which the conventional notion of classroom-based learning is inverted**, so that **students are introduced to the learning material before class**, with classroom time then being used to deepen understanding through discussion with peers and problem-solving activities**.**

➤ **STARS scheme worth Rs 250 crore to fund science projects launched by HRD Ministry on National Science Day**

• The STARS project will be coordinated by the Indian Institute of Science (IISc), Bangalore**.**

• **The Rs 250 crore worth of funds will be used for around 500 science projects.**

• Those who are interested to get their projects funded by STAR need to send in their applications for a competition**.**

• The applications will be released in the first week of April 2019. The selection of the benefitting projects will be done on the basis of competitions**.**

➤ **SHREYAS to provide industry-specific apprenticeship opportunities to fresh graduates**.

• The full name of SHREYAS is *Scheme for Higher Education Youth in Apprenticeship and Skills.*

• The programme basket includes the initiatives of three central ministries, including the HRD, Ministry of Skill Development and Entrepreneurship, and the Ministry of Labour and Employment**.**

• The apprenticeship scheme has been introduced for degree course students mainly for those studying non-technical courses to update them with employable skills as part of their education**.**

➤ **Café Scientifique**

'Café Scientifique' is the first of its kind initiative in the State of Kerala **aimed at popularising Science**.

• The café envisages to bring science back into popular culture by demystifying scientific research for the public and empowering non-scientists to comfortably assess science and technology issues, particularly those that impact social policymaking.

• It is **a grassroots public science initiative based on the French Café Philosophique model**. Originating in England, the concept quickly gained popularity and was adopted by other countries.

• The plan is to organise meetings of science enthusiasts in the district every month at a café or a convenient place, where one or more scientists are invited to talk to the public about new developments in science.

• The project is also aimed at making science relevant, powerful and important to the public, especially the younger generations.

• Various topics such as universe, climate change, evolution, genetics and human-animal relations will be discussed in every monthly gathering.

HEALTH AND SANITATION

➤ **Union Cabinet has approved the proposal for Extension of tenure of the National Commission for SafaiKarmacharis(NCSK) beyond 31.3.2019 for three years**

• NCSK was established in 1993 as per the provisions of NCSK Act 1993 initially for the period upto 1997. Later the validity of Act was initially extended upto 2002 and thereafter upto 2004. The NCSK Act ceased to have effect from 2004. After that the tenure of the NCSK has been extended as a **non-statutory body** from time to time. The tenure of the present Commission is upto 31.3.2019.

• The NCSK has been giving its recommendations to the Government regarding specific programmes for welfare of Safai Karamcharis, study and evaluate the existing welfare programmes for SafaiKaramcharis, investigate cases of specific grievances etc.

- Also as per the provisions of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, the NCSK has been assigned the work to monitor the implementation of the Act, tender advice for its effective implementation to the Centre and State Governments and enquire into complaints regarding contravention/non-implementation of the provisions of the Act.

> **National Drug Dependence Treatment Centre of the All India Institute of Medical Sciences (AIIMS), New Delhi has brought out a Report titled "Magnitude of Substance Use in India"**

Major findings of this Survey

✓ At the national level, about 14.6% of people (among 10-75 year olds) are current users of alcohol. Prevalence is 17 times higher among men than women**.**

✓ About 2.8% of Indians (3.1 crore individuals) report having used any cannabis product within past 12 months (Bhang – 2% or 2.2 crore people; Ganja/Charas – 1.2% or 1.3 Crore people).

✓ States with the higher than national prevalence of cannabis use are **Uttar Pradesh, Punjab, Sikkim, Chhattisgarh and Delhi.**

✓ Though bhang use is more common than ganja/charas, prevalence of harmful/dependent use is proportionately higher for ganja/charas users.

✓ At the national level, the **most common opioid used is Heroin,** (current use 1.14%) followed by Pharmaceutical opioids (current use 0.96%) and then Opium (current use 0.52%) .

✓ About 1.08% of 10-75 year old Indians (approximately 1.18 crore people) are current users of sedatives (non-medical, non-prescription use)

✓ **Inhalants** are the only category of substances for which the prevalence of current use among children and adolescents is higher (1.17%) than adults (0.58%).

> **MEASLES-RUBELLA VACCINATION CAMPAIGN**

- **The latest Global Measles and Rubella Update** says India had 56,399 confirmed measles cases and 1,066 confirmed rubella cases in 2018.

- India, along with ten other WHO South East Asia Region member countries, have resolved to eliminate measles and control rubella/CRS (Congenital Rubella Syndrome) by 2020.

- To achieve the above target, Union Ministry of Health & Family Welfare has initiated a MR vaccination campaign under which all children's in the age group of **9 months to less than 15 years** will be given a single shot of MR vaccination.

- Measles and Rubella are highly **contagious viral diseases that are spread by contact with an infected person through coughing and sneezing.**

- **CRS(Congenital Rubella Syndrome)** is an important cause of severe birth defects. A woman infected with the rubella virus early in pregnancy has a 90% chance of passing the virus to her foetus. This can cause the death of the foetus, or CRS.

> **India rolls out National Viral Hepatitis Control Program: Aim is to eliminate hepatitis by 2030**

- **Viral hepatitis** is a global public health problem that kills nearly 2.72 lakh people annually. **It is an inflammatory condition of the liver caused by five known hepatitis viruses — A, B,C,D and E. Of these, B and C are known to cause 96% mortality.**

- **Of the five viruses, hepatitis A and E are water-borne diseases** that are less severe in nature, while the remaining strains are blood-borne and can be fatal if not detected or treated in time

- **Hepatitis B, C and D are transmitted by unsafe injection practices, infected blood and blood products, sexual transmission and from mother to child**. The infections can progress to cirrhosis and liver cancers.

- **Hepatitis D virus** (HDV) infections occur **only** in those who are infected with **Hepatitis B Virus**.

- According to the action plan, **one model hepatitis treatment centre will be established in each State in a government institution in the first year**. While the number of model centres will be increased gradually, by the end of the second year, efforts will be made to establish one such centre at district level. Setting up a national reference laboratory and State-level reference laboratories is also under planning.

- While hepatitis B requires life-long treatment **which costs around ₹2,500 per month, hepatitis C requires a 84-day long course costing nearly ₹40,000**. "The government has however, managed to procure this course for around ₹2,200 which is a big development.

- ➢ **AYUSH ministry launches e-Aushadhi portal for online licensing of Ayurveda, Siddha ,Unani and Homoeopathy drugs and related matters**

- *e-AUSHADHI* portal is **an acronym for Ayurveda, Unani, Siddha and Homeopathy Automated Drug Help Initiative** and is intended for increased transparency, improved information management facility, improved data usability and increased accountability.

- Timelines will be fixed for processing of application through this portal with SMS and e-mail status updates at each step of the process.

- This portal will not only **aid the licensing authority , manufactures and consumers, as it will provide real time information of the licensed manufactures and their products, cancelled and spurious drugs, contact details of the concerned authority** for specific grievances.

- ➢ **Global health leaders adopt 'Delhi Declaration' on digital health**

- **4th Global Digital Health Partnership Summit:** Adopted the Delhi Declaration on digital health for sustainable development, which called for **WHO's leadership in digital health** and for it to establish a specific mechanism to centrally coordinate digital health to assist its Member States**.**

- The global intergovernmental meeting on digital health was hosted by the Ministry of Health in collaboration with the **WHO and the Global Digital Health Partnership (GDHP).**

- GDHP) is an international collaboration of governments, government agencies and multinational organisations dedicated to improving health and well-being of their citizens through the best use of evidence-based digital technologies.

- It has **five key work Streams:** Cyber Security, Evidence and Evaluation, Policy Environments, Interoperability, Clinical and Consumer Engagement.

- ➢ **'Darwaza Band' for open defecation**

- An aggressive new campaign titled **'Darwaza Band'** to promote **toilet use and freedom from open defecation** across the country's villages is produced by Ministry of Drinking water and Sanitation and led by **Amitabh Bachchan as ambassador (Also features Anushka Sharma)**.

- **The 'Darwaza Band' campaign** has been supported by the **World Bank** and is being rolled out countrywide immediately after the launch. It is designed to encourage behaviour change in men who have toilets but are not using them.

➢ **Swachh Shakti 2019: Rural women Champions for Swachh Bharat**

- **Swachh Shakti-2019 is a national event** which **aims to bring in to focus the leadership role played by rural women in Swachh Bharat Mission**. Women Sarpanches and Panches from all over the country attended the event.

- **The Ministry of Drinking Water and Sanitation** in association with the Govt. of Haryana has organized the Swachh Shakti-2019. Best practices from grass root level in the rural areas for Swachh Bharat were shared by them.

- **First Swachh Shakti program in 2017 at Gandhinagar, second Swachh Shakti event, Swachh Shakti-2018 was held at Lucknow. Now the third edition was inaugurated from Kurukshetra.**

➢ **Swachh Bharat Grameen**

National Annual Rural Sanitation Survey (NARSS) 2018-19, conducted by an Independent Verification Agency (IVA) under World Bank support project to the Swachh Bharat Mission Grameen (SBM-G), has found that *96.5% of the households in rural India who have access to a toilet use it*.

- The survey was conducted between November 2018 and February 2019 and covered 92040 households in 6136 villages across States and UTs of India.

- **The survey used the PPS (Probability Proportion to Size) sampling methodology**, which yields results within a confidence interval of 95%.

- 93.1% of households were found to have access to toilets during the survey period (the corresponding figure as per the SBMG MIS in November 2018 was 96%)

- 90.7% of villages which were previously declared and verified as ODF were confirmed to be ODF. The remaining villages also had sanitation coverage of about 93%.

- 95.4% of the villages surveyed found to have minimal litter and minimal stagnant water.

WOMEN AND CHILD

➢ **National Rural Economic Transformation Project**

India has signed a $250 million loan agreement with the **World Bank** for the *National Rural Economic Transformation Project (NRETP)* that aims to help women in rural households shift to a new generation of economic initiatives by developing viable enterprise for farm and non-farm products.

- The National Rural Economic Transformation project **is additional financing to the $500 million National Rural Livelihoods Project (NRLP)** approved by the World Bank in July 2011.
- The project will **support enterprise development programs for rural poor women and youth** by creating a platform to access finance including start-up financing options to build their individual or collectively owned and managed enterprises.
- The project will **involve developing financial products using digital financial services to help small producer collectives scale-up and engage with the market**.
- **It will also support youth skills development**, in coordination with the Deen Dayal Upadhyaya Grameen Kaushalya Yojana.

➤ **Nari Shakti Puraskar**

- To acknowledge Women's achievements, the Government of India confers **Nari Shakti Puraskars on eminent women and institutions in recognition of their service towards the cause of women empowerment**. The Nari Shakti Awards were initiated in the year 1999.

- **The Ministry of Women and Child Development announces** these national level awards for eminent women, organisations and institutions.

- Nari Shakti Puraskar carries a cash award of Rs.1 Lakh and a certificate for individuals/institutions.

➤ **Oxfam report on Women's labour force participation**

Oxfam, an international non-profit organisation, has released a report on women's labour force participation.

- Irrespective of employment category (casual and regular/salaried), organised or unorganised sector, and location (urban and rural), **women workers in India are paid a lower wage rate.**

- **The gender pay gap** was 34 per cent in India, that is, women get 34 per cent less compared to men for performing the same job with same qualifications.

- **In the organised sector**, women professionals even in the highest ranks of labour (legislators, senior officials, and managers) are also paid less compared to their male counterparts..

- The wage difference is lesser for more skilled workers & more for semi-skilled or unskilled workers.

- **Large pay gaps** in terms of average daily wages exist in male and female wage rates of casual and regular workers in rural and urban areas and the gap is narrower for regular workers in urban areas. On the other hand, for casual workers, wage gap is narrower in rural areas.

- While inequality in jobs has increased, inequality in education has decreased between boys & girls

- While **both men and women are diversifying out of agriculture, almost 75 per cent of rural women are still engaged in it**.

VULNERABLE GROUPS (Tribes, Senior Citizen, Minorities, OBCs, SC/STs, Disabled etc)

➤ **Deendayal Disabled Rehabilitation Scheme**

A National Conference on *"Deendayal Disabled Rehabilitation Scheme (DDRS)"* was recently inaugurated at New Delhi.

- The **Conference was organised by the Department of Empowerment of Persons with Disabilities (DEPwD)**, Ministry of Social Justice and Empowerment.

- The objective of the conference was **to sensitize the stakeholders of the scheme i.e. Programme Implementing Agencies (PIAs), District level officers & State Government officers**.

- *"Scheme to Promote Voluntary Action for Persons with Disabilities"* was revised and *renamed as the "Deendayal Disabled Rehabilitation Scheme (DDRS)"*.

- The approach of this Scheme is *to provide financial assistance to voluntary organizations to make available the whole range of services necessary for rehabilitation of persons with disabilities* including early intervention, development of daily living skills, education, skill-development oriented towards employability, training and awareness generation

POLITY AND GOVERNANCE

- ➤ **The Supreme Court pronounced its verdict to settle the power tussle between Aam Aadmi Party government in Delhi and the Centre**.

- • While the issue over control of services has been referred to a larger bench, the two-judge Constitution bench of the Supreme Court, , said **only Centre has the power to set up an inquiry commission.**

- • **The Supreme Court ruled that the control of the anti-corruption branch (ACB) will rest with the Central government**

- • On land, the court said that matter comes under the purview of the Delhi government but Lieutenant Governor can refer the matter to President

- • On the issue of the power to appoint the Special Public Prosecutor, Supreme Court held that the **Lieutenant Governor while appointing the Special Public Prosecutor, is to act on the aid and advice of the Council of Ministers.**

- • Supreme Court has said that the **"aid and advice" concept cannot apply to the exercise of any judicial or quasijudicial functions by the Lieutenant Governor. The LG is bound by the aid and advice of the Delhi Cabinet only in matters where the Assembly has the powers to make laws.**

For Details on the issue refer to the Revision friendly current affairs (Jun-Nov,2018) issue.

- ➤ **NSA (National Security Act) invoked against three men accused of cow slaughter in M.P.**

- • **The National Security Act of 1980 is an act of the Indian Parliament promulgated on 23 September, 1980whose purpose is** *"to provide for preventive detention in certain cases and for matters connected therewith".*

- • **The act extends to the whole of India except the State of Jammu and Kashmir. It Contains 18 sections**. This act empowers the Central Government and State Governments to detain a person to prevent him/her from acting in any manner prejudicial to the security of India, the relations of India with foreign countries, the maintenance of public order, or the maintenance of supplies and services essential to the community it is necessary so to do. The act also gives power to the governments to detain a foreigner in a view to regulate his presence or expel from the country.

- ➤ **Department of justice launches tele-law mobile app, Nyaya Bandhu.**

- • **The mobile application will enable the para legal volunteers (PLV)'s to perform on field pre-registration of cases with a facility to seek appointment from the panel lawyer on preferred date and time**.

- • The pro bono legal service was developed to accelerate and facilitate practising advocates to register and connect with the registered eligible beneficiaries and thereby, solidify the pro bono culture in the country.

- • The **'***Pro bono* **legal services'** initiative is a **web based platform**, through which interested lawyers can register themselves to volunteer pro bono services for the underprivileged litigants, who are unable to afford it.

- • Through this online portal, litigants from marginalised communities (including members of scheduled castes and scheduled tribes, women, children, senior citizens, persons with low income and persons with disabilities) can also apply for legal aid and advice from the pro bono lawyers.

Three key legal aid and empowerment initiatives of the Department of Justice **– including '*Pro bono* legal services', 'Tele law service' and '*Nyaya Mitra* scheme'.**

The initiative, called **'Tele Law'**, is aimed at facilitating delivery of legal advice through an expert panel of lawyers – stationed at the State Legal Services Authorities (SLSA). The project would connect lawyers with clients through video conferencing facilities at CSCs, operated by para legal volunteers.

Nyaya Mitra scheme is aimed at reducing pendency of cases across selected districts, with special focus on those pending for more than 10 years.

➢ **Voluntary code of ethics for the general election 2019 by Social media**

Social media platforms and the Internet and Mobile Association of India (IAMAI) have presented a *'Voluntary Code of Ethics for the General Election 2019 to the Election Commission of India*.

- Participants including BIGO, ByteDance, Facebook, Google, Sharechat and Twitter have agreed to take action on the content reported by the nodal officer, expeditiously, in accordance with the law.

- The Social media platforms will deploy appropriate policies and processes to facilitate access to information on electoral matters where appropriate and keeping in mind the principle of freedom of expression.

- The platforms have voluntarily undertaken to establish a high-priority communication channel with the nodal officers designated by the ECI.

- The Election commission together with platforms has developed a notification mechanism by which the electoral body can notify them of potential violations under Section 126 of the Representation of the People Act and on other matters.

- Platforms will ensure that political advertisements by parties or their candidates are pre-certified.

➢ **The Mizoram Maintenance of Household Registers Bill, 2019**

The Mizoram Assembly has unanimously passed the Mizoram Maintenance of Household Registers Bill, 2019.

- It aims **to create registers containing the names, details and photographs of every resident of the state, on a household basis**, in an effort to detect illegal foreigners staying and "eating away" benefits of development schemes.

- As per the Bill, it shall be the responsibility of every householder as well as every member of household in the state **to furnish all such information, particulars and passport-size photographs of the members of the household as may be required by the registering authorities**

- Once the information prescribed by the state government is received, the concerned registering authority will compile the details in **two distinct registers- one for the citizen residents and another for non-citizen residents of a village/area/town**.

- Information furnished by individuals for the registers would be **"verified and counter-signed by the president of the local branch of the state-level NGOs as may be designated by the state government from time to time"**.

- The Bill says that **all government departments and police may use the household registers for administrative purposes**, during implementation of development schemes and law enforcement.

- **It defines "citizens"** as a person registered as such, or having requisite qualification as prescribed under the Citizenship Act, 1955

➢ **LOKPAL**

The name of former Supreme Court Judge Justice **Pinaki Chandra Ghose has been cleared by the Lokpal Selection Committee headed by the Prime Minister.**

Lokpal Act 2013

- The Act allows setting up of anti-corruption ombudsman called Lokpal at the Centre and Lokayukta at the State-level.

- **Composition:** The Lokpal will consist of a chairperson and a maximum of eight members.

- **Applicability:** The Lokpal will cover all categories of public servants, including the Prime Minister. But the armed forces do not come under the ambit of Lokpal.

- **The Act also incorporates provisions for attachment and confiscation of property acquired by corrupt means**, even while the prosecution is pending.

- **The States will have to institute Lokayukta** within one year of the commencement of the Act.

- The Act also ensures that public servants who **act as whistleblowers are protected**.

➢ **Aadhaar and other Laws (Amendments) ordinance, 2019**

- The Union Cabinet has approved the *promulgation of an Ordinance to make amendments to the Aadhaar Act 2016, Prevention of Money Laundering Act 2005 & Indian Telegraph Act 1885*.

- The amendments would enable UIDAI to have a more robust mechanism to serve the public interest and restrain the misuse of Aadhaar.

- Subsequent to this amendment, no individual shall be compelled to provide proof of possession of Aadhaar number for the purpose of establishing his identity unless it is so provided by a law made by Parliament.

- The Supreme Court in its judgement had held *Aadhaar to be constitutionally valid*. However, *it read down/struck down few sections of the Aadhaar Act and Regulations and gave several other directions in the interest of protecting the fundamental rights to privacy*.

- Consequently it was proposed to amend the Aadhaar Act, Indian Telegraph Act and the Prevention of Money Laundering Act in line with the Supreme Court directives and the report of Justice *B.N.Srikrishna (Retd.) committee on data protection, in order to ensure that personal data of Aadhaar holder remains protected against any misuse and Aadhaar scheme remains in conformity with the Constitution*.

INDIAN ECONOMY

➢ **India withdraws Most Favoured Nation status from Pakistan**

• **Most Favoured Nation** is a treatment accorded to a trade partner to ensure non-discriminatory trade between two countries vis-a-vis other trade partners.

• In accordance with the **MFN principle** and its obligations under the WTO, India accorded Pakistan MFN status in 1996. However, Pakistan is yet to transition fully to MFN status for India.

• **Article 1 of General Agreement on Tariffs and Trade (GATT),** 1994, requires every World Trade Organisation member country to accord MFN status (or preferential trade terms with respect to tariffs and trade barriers) to all other member countries

• **The primary purpose of the WTO is to open trade for the benefit of all.** In that sense, "most favoured" sounds like a contradiction. But even though it suggests special treatment, in the WTO **it actually means non-discrimination**, that is **treating virtually everyone equally**. In effect, then, every WTO member is supposed to be"most favoured" for all other WTO members

➢ **SATAT Scheme**

• It is an initiative aimed at providing a **Sustainable Alternative Towards Affordable Transportation** as a developmental effort that would benefit both vehicle-users as well as farmers and entrepreneurs.

• **SATAT** was launched with a four-pronged agenda of utilising more than 62 million metric tonnes of waste generated every year in India, cutting down import dependence, supplementing job creation in the country and reducing vehicular emissions and pollution from burning of agricultural / organic waste. **Under the Initiative Bio Gas will be promoted as an alternative Transport Fuel.**

• **Bio-gas is produced naturally through a process of anaerobic decomposition** from waste / bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc. After purification, it is compressed and called **CBG(Compressed Bio Gas)**, which has **pure methane content of over 90%.**

• **Compressed Bio-Gas is exactly similar to the commercially available natural gas in its composition and energy potential. CBG can be used as an alternative, renewable automotive fuel. Given the abundance of biomass in the country, CBG has the potential to replace CNG in automotive, industrial and commercial uses in the coming years.**

➢ **National Mineral Policy, 2019**

• The aim of National Mineral Policy 2019 is to have a more effective, meaningful and implementable policy that brings in further transparency, better regulation and enforcement, balanced social and economic growth as well as sustainable mining practices.

Features:

• **One of the highlights of the new Policy is that it proposes to grant industry status to mining activity**. This change will enable private firms to avail low-cost finance for not only exploration and mining within the country but also for acquiring mineral assets in other countries.

• Apart from **encouraging private firms to undertake exploration**, the new policy also provides for **auction of unused reserved areas given to PSUs** which can then be developed by private sector.

- Govt intends to bring **taxes, levies & royalty at par with world benchmarks** to help private firms. There is a focus on Make In India and gender sensitivity in the vision spelt out in Policy.

- **The 2019 Policy also introduces the concept of Inter-Generational Equity that deals with the well-being not only of the present generation but also of the generations to come** and also proposes to constitute an inter-ministerial body to institutionalise the mechanism for ensuring sustainable development in mining

➢ **Report on Determining Methodology for Fixing National Minimum Wage**

- The Ministry of Labour and Employment had constituted an expert committee on under the Chairmanship Dr. Anoop Satpathy, to review and recommend methodology for fixation of **National Minimum Wage (NMW).**

- **The Expert Committee had the mandate to examine and review the norms and methodology for fixation of national minimum wage**; and determine the base level National minimum wage/wages through **an evidence-based approach**.

- **On the basis of the aforesaid approach, the report has recommended to fix the need based national minimum wage for India at INR 375 per day (or INR 9,750 per month) as of July 2018**, irrespective of sectors, skills, occupations and rural-urban locations for a family comprising of 3.6 consumption unit. It has also recommended to introduce an additional house rent allowance (city compensatory allowance), averaging up to INR 55 per day i.e., INR 1,430 per month for urban workers over and above the NMW.

- **Minimum Wage**: Minimum wages have been defined as "the minimum amount of remuneration that an employer is required to pay wage earners for the work performed during a given period, which cannot be reduced by collective agreement or an individual contract. **This definition refers to the binding nature of minimum wages, regardless of the method of fixing them**

➢ **Pradhan Mantri Shram Yogi Pension Yojana (PMSYM)(Age Group :18-40 years)**

- The Pradhan Mantri Shram Yogi Maandhan Yojana is aimed at benefiting **10 crore workers under the unorganised secto**r including household helps, rickshaw pullers, agricultural labourers and *beedi* workers.

- The **scheme will benefit workers in the unorganised sector** who **earn up** to **Rs. 15,000 per month**. The **Pradhan Mantri Shram Yogi Maandhan Yojana** will provide these workers **an assured pension of Rs. 3,000 per month** after they turn 60 year.

- According to the scheme, a worker **joining the scheme at 29 years of age or above will have to contribute Rs. 100 per month while those joining at the age of 18 will have to contribute Rs.55 per month**.

➢ **Periodic Labour Force Survey - NSSO**

- **The NSSO recently released a draft report on unemployment based on the periodic labour force survey (PLFS**). Earlier, the NSSO used to conduct quinquennial (5-year) surveys.

- The report found that the unemployment rate was 6.1% in 2017-18, which was at 2.2% in 2011-12.

- The only year of comparable data when the unemployment rate was higher was in 1972-73.

- **The joblessness rate among the youth (15-29 years)** was at a significantly high level compared to the previous years and much higher compared to that in the overall population.

- It also showed that joblessness was **higher in urban India** (7.8%) than in rural India (5.3%).

- **Labour force participation rate (LFPR)** is defined as the section of working population in the age group of 16-64 in the economy currently employed or seeking employment.

- **LFPR declined** from 39.5% in 2011-12 to 36.9% in 2017-18.

➤ **'SWAYATT'**

- SWAYATT is an **initiative to promote Start-ups, Women and Youth Advantage Through eTransactions** on Government e Marketplace (GeM).

- This will bring together the key stakeholders within the Indian entrepreneurial ecosystem to **Government e-Marketplace the national procurement portal.**

- **GeM Start-up Runway**: **an initiative of GeM in association with Start -up India** to **facilitate Start-ups registered with Start -up India** to a**ccess the public procurement market a**nd sell innovative products and services to government buyers.

- GeM Start-up Runway will address goals and objectives under United Nations *Sustainable Development Goal 9*: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

GeM is a one stop portal to facilitate **online procurement of common use Goods & Services** required by **various Government Departments / Organizations / PSUs**. It provides the **tools of e-bidding, reverse e-auction and demand aggregation to facilitate the government users achieve the best value for their money**. The purchases through GeM by Government users have been authorized and made mandatory by Ministry of Finance

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➤ **New Delhi International Arbitration Centre ordinance – 2019**

The Union Cabinet has approved promulgation of an Ordinance for establishing the ***New Delhi International Arbitration Centre (NDIAC) for the purpose of creating an independent and autonomous regime for institutionalised arbitration***.

- The benefits of institutionalized arbitration will **accrue to Government and its agency and to the parties to a dispute**.

- This shall be to the advantage of the public and the public institutions in terms of quality of expertise and costs incurred and will facilitate India becoming a hub for Institutional Arbitration.

➤ **Limit for Way and Means Advance (WMA)**

The RBI in consultation with the government of India has set the limits for Ways and Means Advances (WMA) for the first half of the financial year 2019-20 (April 2019 to September 2019) at Rs 75000 crore.

- The Reserve Bank of India gives temporary loan facilities to the centre and state governments as a banker to government. This temporary loan facility is called Ways and Means Advances (WMA).

- The WMA scheme for the Central Government was introduced on April 1, 1997, after putting an end to the four-decade old system of adhoc (temporary) Treasury Bills to finance the Central Government deficit.

- **The WMA scheme was designed to meet temporary mismatches in the receipts and payments of the government**. This facility can be availed by the government if it needs immediate

cash from the RBI. The WMA is to be vacated after 90 days. **Interest rate for WMA is currently charged at the repo rate**. The limits for WMA are mutually decided by the RBI and the Government of India.

- When the WMA limit is crossed the government takes recourse to overdrafts, which are not allowed beyond 10 consecutive working days. The interest rate on overdrafts would be 2 percent more than the repo rate.

➤ **Purchasing Managers' Index (PMI)**

PMI or a **Purchasing Managers' Index (PMI)** is *an indicator of business activity — both in the manufacturing and services sectors*.

- It is a **survey-based measure** that asks the respondents about changes in their perception of some key business variables from the month before.

- It is calculated separately for manufacturing & services sectors and then a composite index is constructed.

- **The PMI is derived from a series of qualitative questions**. Executives from a reasonably big sample, running into hundreds of firms, are asked whether key indicators such as output, new orders, business expectations and employment were stronger than the month before and are asked to rate them.

- The PMI also gives an indication of corporate earnings and is closely watched by investors as well as the bond markets. A good reading enhances the attractiveness of an economy Vis-a- Vis another competing economy.

➤ **Advanced Pricing Agreements(APAs)**

The Central Board of Direct Taxes (CBDT) has entered into 18 *Advance Pricing Agreements (APAs)* in March this year, including three bilateral APAs.

- With the signing of these APAs, the total number of APAs entered into by the CBDT in the year 2018-19 stands at 52, which includes 11 bilateral APAs. The total number of APAs entered into by the CBDT as of now stands at 271, which inter alia includes 31 bilateral APAs.

- An APA is *an agreement between a taxpayer and the tax authority determining the Transfer Pricing methodology for pricing the tax payer's international transactions for future years*. An APA provides certainty with respect to the tax outcome of the tax payer's international transactions.

➤ *Asian Development Outlook 2019*

ADB publishes Asian Development Outlook 2019.

Highlights of Report

- Growth in developing Asia is projected to soften to 5.7% in 2019 and 5.6% in 2020. Excluding Asia's high-income newly industrialized economies, growth is expected to slip from 6.4% in 2018 to 6.2% in 2019 and 6.1% in 2020.

- Since oil prices rose and Asian currencies depreciated, inflation edged up last year but remained low by historical standards. In light of stable commodity prices, inflation is anticipated to remain subdued at 2.5% in both 2019 and 2020.

- Only 20 of 45 individual economies are projected to see growth accelerate in 2019.

India related

✓ **Growth rate:** India's growth forecast is cut to 7.2% for 2019-20 because of a slower-than-expected pickup in investment demand. The growth rate in Financial Year 2020-21 is likely to be 7.3%.

✓ **Recovery may be due to**– agriculture and stronger domestic demand, improved health of banks and corporations and implementation of a value-added tax.

✓ **The inflation** is expected to average around 4% in the first half of FY2019, and therefore the Reserve Bank would have some room for lowering policy rates further increasing credit.

➢ **World Bank Report on Remittance**

World Bank has released its *Migration and Development Brief*

Highlights of Report

- **India is positioned as the world's top recipient of remittances** with its diaspora sending USD 79 billion back home in 2018. The **remittances in 2018 grew by over 14 percent in India**.

- India managed to retain its top spot in remittances by registering a significant flow of remittances from USD 62.7 billion in 2016 to USD 65.3 billion 2017 and to USD 79 billion in 2018, a significant growth over the last three years.

- **Natural disasters like Kerala floods likely boosted the financial help that migrants sent to their families**.

- The remittances to low-and middle-income countries reached a record high of USD 529 billion in 2018, an increase of 9.6 percent from USD 483 billion in 2017.

- Global remittances, including flows to high-income countries, reached USD 689 billion in 2018, up from USD 633 billion in 2017. The overall increase in remittances regionally was driven by a stronger economy and employment situation in the United States and outward flows from few Gulf Cooperation Council (GCC) countries and the Russian Federation.

➢ *Seeding of Aadhaar with bank accounts will not be compulsory for small and marginal farmers to avail the second installment of Rs 2,000 due on April 1 under the Pradhan Mantri Kisan Samman Nidhi (PM-KiSAN) scheme. However, Aadhaar number would be required for release of second installment*

BANKING & FINANCE

➢ **RBI Launches Digital Payments Ombudsman Scheme To Address User Complaints**

- As a part of the Ombudsman Scheme for Digital Transactions (OSDT), under **Section 18 of the Payment and Settlement Systems Act, 2007,** the banking regulator will be providing a free of cost complaint redressal mechanism to address the issues in customer services involved in the digital transaction done through non-bank entities regulated by RBI.

- The RBI may appoint one or more of its officer as chief general manager or general manager who will act as an ombudsman for the digital transactions.

- **An ombudsman is an official who has been appointed to investigate and redress complaints from people against a company, organisation, or a public authority**.

- The complaints related to online transactions which are conducted through banks will continue to be handled under the Banking Ombudsman Scheme.

➢ **Government declares currency printing presses and mints as public utility service**

- The government has declared **printing presses and mints as public utility service** under **the Industrial Disputes Act, 1947. Following the declaration, employees will have to comply with rules pertaining to strikes and lockouts.**

- The printing presses and mints included in the declaration are India Security Press (Nashik), India Government Mints (Kolkata, Noida, Mumbai and Hyderabad), Security Printing Press (Hyderabad), Security Paper Mill (Hoshangabad) Services in the Bank Note Press (Dewas), and Currency Note Press (Nashik Road).

Public utility service is defined as any railway service (or any transport service for the carriage of passengers or goods by air); any service in, or in connection with the working of, any major port or dock; any section of an industrial establishment, on the working of which the safety of the establishment or the workmen employed therein depends; any postal, telegraph or telephone service; any industry which supplies power, light or water to the public; any system of public conservancy or sanitation.

➢ **Cabinet approves establishment of a unified authority for regulating all financial services in International Financial Services Centres (IFSCs) in India through International Financial Services Centres Authority Bill, 2019**

- The first IFSC in India has been set up at GIFT City, Gandhinagar, Gujarat. An IFSC enables bringing back the financial services and transactions that are currently carried out in offshore financial centers by Indian corporate entities and overseas branches / subsidiaries of financial institutions (FIs) to India by offering business and regulatory environment that is comparable to other leading international financial centers in the world like London and Singapore.

- **Currently, the banking, capital markets and insurance sectors in IFSC are regulated by multiple regulators, i.e. RBI, SEBI and IRDAI. The dynamic nature of business in the IFSCs necessitates a high degree of inter-regulatory coordination. Hence, a need is felt for having a unified financial regulator for IFSCs in India** to provide world class regulatory environment to financial market participants.

➢ **Cabinet approves Rs 1450 crore for the share capital of RBI in National Housing Bank**

- **NHB is an All India Financial Institution (AIFI), set up in 1988, under an Act of Parliament, viz. the National Housing Bank Act, 1987** (Central Act No. 53 of 1987). It is an apex agency established to operate as a principal agency to promote housing finance institutions both at local and regional levels and to provide financial and other support incidental to such institutions and for matters connected therewith.

- Up till now, the authorized capital of NHB stands at Rs 2000 crore of which Rs 1450 crore has been subscribed by RBI. Currently, the capital is fully subscribed by RBI. Subsequent to the payment of this amount to RBI, the subscribed capital of NHB shall stand transferred to and vested in the **Central Government.**

- The **change in ownership from RBI to GoI(Govt. Of India)** will also segregate RBI's role as banking regulator and as owner of NHB.

➢ **Women's Livelihood Bond**

• The **World Bank, UN Women (a United Nations entity dedicated to gender equality and empowerment of women), and Small Industries Development Bank of India (SIDBI)** have come together to launch a **five-year tenor women's livelihood bond (WLB).**

• The proceeds from these social impact bonds will be used to help rural women in the country's poorest States to set up or scale up their own enterprises. WLB's will be **unsecured (Not backed by collateral)** and **unlisted (not listed, traded on stock exchanges)**

• **The return on these bonds will be 3% per annum.**

• **SIDBI has also put together its own ₹1,000 crore social-impact fund 'Prayaas' for providing funding support to women entrepreneurs.**

• **The proposed bond will enable individual women entrepreneurs** in sectors like food processing, agriculture, services, and small units to borrow around Rs 50,000 to Rs 3 lakh at an annual interest rate of around 13%-14% or less.

➢ **Avendus Launches $1 billion ESG fund**

• Financial services firm **Avendus Capital** on Thursday launched a $1-billion fund to invest solely in companies that **promote environment, social, and governance (ESG) values**

• ESG investing, while seeking positive returns, also considers and evaluates long-term impact that business practices have on society, the environment, and the performance of the business itself.

• The fund will evaluate the top 100 **NSE** stocks and invest in those which make it to the top 50 in ESG parameters.

➢ **EASE (Enhanced Access and Service Excellence) reform Index**

Government's *EASE (Enhanced Access and Service Excellence) reform index* has been released.

• EASE index is prepared by **Indian Banking Association (IBA) and Boston Consulting Group**.

• It is **commissioned by the Finance Ministry**.

• It is **a framework that was adopted last year to strengthen public sector banks, and rank them on metrics** such as responsible banking, financial inclusion, credit off-take and digitisation.

• **Punjab National Bank has topped the list**. It is followed by Bank of Baroda, State Bank of India (SBI), and Oriental Bank of Commerce.

• The EASE Index report also noted PSU banks' strengthening of the bad-loan recovery process, pointing to the success of the Insolvency and Bankruptcy Code in fast-tracking resolution process.

➢ **Usha Thorat Panel for Offshore rupees market**

RBI has constituted a panel under its former Deputy Governor **Usha Thorat to examine issues related to offshore rupee markets** and recommend policy measures to ensure the **stability of the external value of the domestic currency.**

➢ **PSBloansin59minutes.com**

PSBloansin59minutes.com launched **three months ago** has **emerged** as the *largest online lending platform*, according to a report by **global financial firm Credit Suisse.**

- The portal was launched in November *to provide credit of up to Rs 1 crore to micro, small and medium enterprises (MSMEs) in just 59 minutes*.
- It is one of its kind platforms in MSME segment which *integrates advanced fintech to ensure seamless loan approval and management*. The loans are undertaken without human intervention till sanction and or disbursement stage.

> **Guidelines for White Label ATMs**

RBI has come up with *a review of operations of White Label ATMs (WLAs)* in the country.

- The **WLA Operators** to **buy wholesale cash, above a threshold of 1 lakh pieces (and in multiples thereof) of any denomination, directly from the Reserve Bank (Issue Offices) and Currency Chests** against full payment.
- The operators to **source cash from any scheduled bank, including Cooperative Banks and Regional Rural Banks**.
- The operators to **offer bill payment and Interoperable Cash Deposit services, subject to technical feasibility and certification by National Payments Corporation of India (NPCI)**.
- **The display advertisements pertaining to non-financial products / services anywhere within the WLA premises, including the WLA screen, except the main signboard**. However, it shall be ensured that the advertisements running on the screen disappear once the customer commences a transaction.
- **Banks to issue co-branded ATM cards in partnership with the authorised WLA Operators and may extend the benefit of 'on-us' transactions to their WLAs as well**.
- All guidelines, safeguards, standards and control measures applicable to banks relating to currency handling, and cyber-security framework for ATMs, shall also be applicable to the WLA Operators.

> **Voluntary retention route for Foreign Portfolio Investors**

- *It is a new channel of investment available to FPIs to encourage them to invest in debt markets in India over and above their investments through the regular route*. The objective is to attract long-term and stable FPI investments into debt markets while providing FPIs with operational flexibility to manage their investments.
- This new investment route was **proposed by the central bank(RBI) in** October 2018 at a time the rupee was weakening against the dollar very sharply.
- Guidelines say that investments through VRR will be free of macro-prudential and other regulatory prescriptions . But the minimum retention period shall be three years, or as decided by RBI.

> **Global Trademark System**

Cabinet approves proposal for accession of India to:

- The **Nice Agreement** on the International classification of goods and services for the **purposes of registration of marks.**
- The **Vienna Agreement** for setting up an International classification of the **figurative elements of marks.**
- The **Locarno Agreement** for establishing an International classification for **industrial designs.**

- **Accession to the Nice, Vienna and Locarno Agreements** will help **the Intellectual Property Office in India to harmonise the classification systems for examinational of trademark and design applications, in line with the classification systems followed globally**.

- It would give **an opportunity to include Indian designs, figurative elements and goods in the international classification systems**.

- The accession would also **facilitate in exercising rights in decision making processes regarding review and revision of the classifications under the agreement**.

➤ **The Financial Stability and Development Council (FSDC)**

FSDC meeting held in March was chaired by the Union **Finance Minister.**

- The Financial Stability and Development Council (FSDC) was constituted in December, 2010. The FSDC was set up to strengthen and institutionalise the mechanism for maintaining financial stability, enhancing inter-regulatory coordination and promoting financial sector development.

- **An apex-level FSDC is not a statutory body**.

- *The Council is chaired by the Union Finance Minister* and its members are Governor, Reserve Bank of India; Finance Secretary and/or Secretary, Department of Economic Affairs; Secretary, Department of Financial Services; Chief Economic Adviser, Ministry of Finance; Chairman, Securities and Exchange Board of India; Chairman, Insurance Regulatory and Development Authority and Chairman, Pension Fund Regulatory and Development Authority. It also includes the chairman of the Insolvency and Bankruptcy Board (IBBI).

- **The Council deals, inter-alia, with issues relating to financial stability, financial sector development, inter–regulatory coordination, financial literacy, financial inclusion and macro prudential supervision of the economy including the functioning of large financial conglomerates**. No funds are separately allocated to the Council for undertaking its activities.

➤ *Banning of Unregulated Deposit Schemes Bill*

The Union Cabinet approved promulgating an ordinance with regard to the ***Banning of Unregulated Deposit Schemes Bill***, to protect gullible investors from Ponzi schemes.

- The Ordinance will immediately tackle the menace of illicit deposit-taking activities in the country launched by rapacious operators.

- It will altogether ban unregulated deposit taking schemes, and the law has adequate provisions for punishment and disgorgement or repayment of deposits

➤ **Electoral Bond Scheme**

The Election Commission of India (ECI) has told the Supreme Court that the electoral bonds, wreck transparency in political funding. In its affidavit submitted to the Supreme Court, the EC pointed to the amendments made to key laws, with dangerous consequences.

Key Observations

- Coupled with the removal of cap on foreign funding, electoral bonds invite foreign corporate powers to impact Indian politics.

- Donations received through electoral bonds would cause a "serious impact" on transparency in funding of political parties.

- Amendments would pump in black money for political funding through shell companies and allow unchecked foreign funding of political parties in India which could lead to Indian politics being influenced by foreign companies.

About Electoral Bond

- Electoral bonds will allow donors to pay political parties using banks as an intermediary.

- Although called a bond, the banking instrument resembling promissory notes will not carry any interest. Electoral bond, which will be a bearer instrument, will not carry the name of payee and can be bought for any value, in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh or Rs 1 crore.

- As per provisions of the Scheme, electoral bonds may be purchased by a citizen of India, or entities incorporated or established in India. A person being an individual can buy electoral bonds, either singly or jointly with other individuals. Only the registered Political Parties which have secured not less than one per cent of the votes polled in the last Lok Sabha elections or the State Legislative Assembly are eligible to receive the Electoral Bonds.

- The electoral bonds are aimed at rooting out the current system of largely anonymous cash donations made to political parties which lead to the generation of black money in the economy.

AGRICULTURE

➢ **New Scheme- namely "Pradhan Mantri KIsan SAmman Nidhi (PM-KISAN)"**

- To extend direct income support at the rate of Rs. 6,000 per year to farmer families, having cultivable land upto 2 hectares is announced.

- Under this Government of India funded Scheme, Rs.2,000 each will be transferred to the bank accounts of around 12 crore Small and Marginal farmer families, in three equal instalments.

- A **dedicated PM Kisan Portal** will be launched for implementation of the scheme

- This is a **Central Sector Scheme** and will be **funded fully by the Government of India.**

➢ **Policy Bias Against Rainfed Agricultural Area**

- There has been **negligence toward rainfed areas** which is leading to lower incomes for farmers in these areas. Further farmers in rainfed areas are **receiving 40% less of their income from agriculture** in comparison to those in irrigated areas.

- A region is classified as rainfed, if assured irrigation is not provided to majority of net sown area. It is an interrelation of production systems, natural resources & people's livelihoods in rainfed regions.

- Ashok Dalwai is the CEO of the **National Rainfed Area Authority**. He also heads the **government's Committee on Doubling of Farmers' Income.**

➢ **Agri-Market Infrastructure Fund (AMIF)**

- **AMIF** is a **corpus of Rs. 2000 crore to be created with NABARD** for development and upgradation of agricultural marketing infrastructure in **Gramin Agricultural Markets** and Regulated Wholesale Markets.

- It will provide the **State/UT Governments subsidized loan for their proposal for developing marketing infrastructure in 585 Agriculture Produce Market Committees (APMCs) and 10,000 Grameen Agricultural Markets (GrAMs).**

- In these **GrAMs**, physical and basic infrastructure will be strengthened using MGNREGA and other Government Schemes.

➢ **Rashtriya Kamdhenu Aayog for Conservation, Protection and Development of cows and their progeny**

- The setting up of Rashtriya **Kamdhenu Aayog** will lead to **conservation, protection and development of cattle population** in the country including **development and conservation of indigenous breeds.**

- **The Rashtriya Kamdhenu Aayog** will work in collaboration with Veterinary, Animal Sciences or Agriculture University or departments or organizations of the Central/State Government engaged in the task of research in the field of breeding and rearing of cow, organic manure, biogas etc

INDUSTRY

➢ **National Policy on Software Products – 2019 to develop India as a Software Product Nation**

The Policy aims to align with other Government initiatives such as Start-up India, Make in India and Digital India, Skill India etc so as to help the industry grow at Compound Annual Growth Rate (CAGR) of 40% to reach $70-80 billion by 2025, while creating employment opportunities for 3.5 million people.

The policy has the following **five missions:**

- Promote creation of a sustainable Indian software product industry, driven by intellectual property (IP), leading to a ten-fold increase in India share of Global Software product market by 2025.

- To nurture 10,000 technology startups in software product industry, including 1000 such technology startups in Tier-II and Tier-III towns & cities and generating direct and in-direct employment for 3.5 million people by 2025.

- To create a talent pool for software product industry through (i) up-skilling of 1,000,000 IT professionals, (ii) motivating 100,000 school and college students and (iii) generating 10,000 specialized professionals that can provide leadership

- To build a cluster-based innovation driven ecosystem by developing 20 sectoral and strategically located software product development clusters having integrated ICT infrastructure, marketing, incubation, R&D/testbeds and mentoring support.

- In order to evolve and monitor scheme & programmes for implementation of this policy, National Software Products Mission will be set up with participation from Govt, Academia and Industry.

➢ **National Policy on Electronics 2019**

- The 2019 Policy on Electronics proposes to propel the growth of Electronics System Design and Manufacturing (ESDM) industry in the country. It **replaces the National Policy of Electronics 2012 (NPE 2012).**

Features of National Policy on Electronics 2019

- Create eco-system for globally competitive ESDM sector by promoting domestic manufacturing and export in the entire value-chain of ESDM.

- Provide incentives and support for manufacturing of core electronic components

- Provide special package of incentives for mega projects which are extremely high-tech and entail huge investments, such as semiconductor facilities display fabrication, etc

- Formulate suitable schemes and incentive mechanisms to encourage new units and expansion of existing units

- **Promote Industry-led R&D and innovation in all sub-sectors of electronics such as 5G, IoT/ Sensors, Artificial Intelligence (AI), Machine Learning, Virtual Reality (VR), Drones, Robotics, Additive Manufacturing, Photonics, Nano-based devices, etc**

- **Special thrust on Fabless Chip Design Industry, Medical Electronic Devices Industry, Automotive Electronics Industry and Power Electronics** for Mobility and Strategic Electronics Industry.

- **Create Sovereign Patent Fund (SPF) to promote the development and acquisition of IPs in ESDM sector**

- Promote trusted electronics value chain initiatives to improve national cyber security profile

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> **Govt renames DIPP as Department for Promotion of Industry and Internal Trade**

- The **Department of Industrial Policy and Promotion (DIPP)** has been **renamed as the Department for Promotion of Industry and Internal Trade** with a mandate to deal with matters related to start-ups, facilitating ease of doing business among others.

- The newly-named department under the Ministry of Commerce and Industry will look into matters related to promotion of internal trade, including retail trade, welfare of traders and their employees, facilitating ease of doing business and start-ups.

- **The matters related to internal trade were earlier under the domain of the Ministry of Consumer Affairs.**

> **2nd Phase of River Information System(RIS) Between Farakka- Patna on National Waterway-1 (River Ganga)**

- **RIS** :It is a **form of vessel traffic management using next generation technology**. It will help in crises management and enhanced inland navigation safety by preventing ship-to-ship collisions, ship - bridge collisions, groundings etc.

- RIS Services are a combination of sensors like Automated Identification system, Meteorological and Hydrological equipment and software related services designed to optimize traffic and transport processes in inland navigation. RIS works on the lines of Air Traffic Controls.

- RIS aims to streamline the exchange of information between waterway operators and users. The service **will immensely help in optimization of navigation and minimize collision risks in the waterway** thus benefitting the users greatly.

- IWAI is implementing the project in three phases on NW-1 at a cost of about Rs 57 Cr. Earlier, in 2016, the first phase of RIS - 545 km on Haldia- Farakka stretch was commissioned. Work on third, 356 kms Patna-Varanasi stretch   is currently in progress.

- Under phase II, five base stations – Manihari, Bhagalpur, Munger, Barh and Hatidah and one control station have been made at Patna

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- **IWAI** is implementing **the Jal Marg Vikas Project (JMVP)** for capacity augmentation of navigation on National Waterway-1on the Haldia – Varanasi stretch of Ganga-Bhagirathi-Hooghly River System with the technical and financial support of the World Bank at a cost of Rs 5369 Crore.
- *Inland Waterways Authority of India* **(IWAI) is the statutory authority in charge of the waterways in**

India. It was constituted under NHAI Act-1985 by parliament of 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.

- Under Jal Marg Vikas Pariyojana, a fish pass has been envisaged for the free movement **of Hilsa Fish : Hilsa fish - which has a significant cultural importance in West Bengal, besides being the national fish of Bangladesh, at Farakka Navigation Lock.**

- **Fish pass/Fish way** is a structure **on or around artificial and natural barriers (such as dams, locks and waterfalls) to facilitate natural fish migration**. Most fishways enable fish to pass around the barriers by swimming into the waters on the other side**.**

➢ **Government Announces Angel Tax Exemption For Recognised Start-Ups**

- **Angel Tax**: It is **a tax on the excess capital raised by an unlisted company through the issue of shares** over and above the fair market value of those shares.

- The **tax was introduced in the Finance Budget of 2012** with an **aim to curb money-laundering through the sale of shares of private unlisted companies at bloated prices**.

- The government has also widened the definition of a start-up, announcing that an entity shall be considered a start-up for up to 10 years from its date of incorporation/registration instead of the existing period of seven years.

- Start-ups can apply for an **exemption** if their paid-up share capital is up to Rs25 crore, compared to Rs10 crore earlier.

➢ **With Samadhan portal, industrial dispute resolution is now a click away**

- **The Union government has launched a portal to help workers and employers raise industrial disputes online.**

- The portal, known as **Samadhan (Software Application for Monitoring and Disposal, Handling of Industrial Disputes),** has been launched on a pilot basis for workers belonging to five states – Chhattisgarh, Delhi, Karnataka, Rajasthan, and Odisha.

- **The bodies which help in resolving the disputes** – office of chief labour commissioner (central), industrial relations division, and central government industrial tribunal (CGIT)-cum-labour courts – will be able to get the requests and send updates to workers and employers on this portal.

- **Under the Industrial Disputes Act, 1947, an industrial dispute is defined as any dispute or difference between employers and employees or amongst a group of workers or employers related to employment, termination, and condition of work, among others**. Employees in managerial or supervisory roles, drawing a salary more than Rs 10,000 a month, are not allowed to raise an industrial dispute under the law.

➢ **National Productivity Council**

- The National Productivity Council observed National Productivity Day on 12th February, and National Productivity Week till 18[th]February. **"Industry 4.0 Leapfrog Opportunity for India " has been selected as the theme for the National Productivity Week -2018**.

- Over its 59 years of existence, NPC has built extensive experience in problem solving right from the shop floor level to strategic and policy issues at the macro level.

- **Industry 4.0 or the fourth industrial revolution as it is called, is emerging globally as a powerful force and is being called as the next industrial revolution**. It is characterized by the increasing digitization and interconnection of products, value chains and business models. Industry. **Industry 4.0 would mean the convergence of real and virtual worlds-the next phase in bringing together conventional and modern technologies in manufacturing**. This will result in the "Smart Factory", which is characterized by versatility, resource efficiency, ergonomic design and direct integration with business partner.

- **The first industrial revolution was triggered by water and steam** power to move from human labour to mechanical manufacturing. The **second industrial revolution built on electric power to create mass production**. The t**hird used electronic and information technology** to automate manufacturing. The **fourth is the current trend of automation and data exchange in manufacturing technologies.**

National Productivity Council (NPC) is a national level autonomous organization under the administrative control of the Department to promote productivity culture in India**. Established as a registered society in 1958 by the Government of India, it is a tri-partite non-profit organization** with equal representation from the government, employers and workers' organizations, apart from technical and professional institutions including members from local productivity councils and chamber of commerce on its Governing Body. Besides providing training, consultancy and undertaking research in the area of productivity, **NPC also implements the productivity promotion schemes of the Government and carry out the programmes of the Tokyo based Asian Productivity Organization (APO),** an inter-governmental body of which the Government of India is a founder member.

➢ **Khadi Gramodyog Vikas Yojana**

- **8 different schemes of Khadi & Village Industries are now merged under two heads i.e. 'Khadi Vikas Yojana' and 'Gramodyog Vikas Yojana':**

- Khadi Vikas Yojana includes Market Promotion & Development Assistance (MPDA), Interest Subsidy Eligibility Certificate (ISEC), Workshed, Strengthening Weak Infra, Aam Aadmi Bima Yojana, Khadi Grant.

- **Gramodyog Vikas Yojana** {Village Industries Grant}

- **Rozgar Yukta Gaon (RYG)** aims at introducing an **'Enterprise-led Business Model' in place of 'Subsidy-led model'** through a partnership among 3 stakeholders- Khadi Reform and Development Programme (KRDP)-assisted Khadi Institution, Artisans and Business Partner.

- It will be **rolled out in 50 Villages by providing 10,000 Charkhas, 2000 looms & 100 warping units** to Khadi artisans, and would create direct employment for 250 Artisans per village.

➢ **World Gold Council Report**

- India, which is the world's largest consumer of gold, has the **11th largest gold reserve**, with the **current holding pegged at 607 tonnes**.

- **International Monetary Fund (IMF) is third on the list with total gold reserves of 2,814 tonnes**.

- Top slot is occupied by the U.S., which boasts of gold reserves of 8,133.5 tonnes, followed by Germany with 3,369.7 tonnes.

- Among Asian countries, China and Japan have more reserves of the precious metal when compared to India.

➤ **'IPrism'**

• The **Cell for IPR Promotion and Management (CIPAM)**, Department for Promotion of Industry and Internal Trade, in collaboration with ASSOCHAM and ERICSSON India, has launched the second edition **of 'IPrism', an Intellectual Property (IP) competition for students of schools, polytechnic institutes, colleges and universities.**

• Cell for IPR Promotion and Management (CIPAM) has been created as a professional body under the aegis of DIPP to take forward the implementation of the National IPR Policy that was approved by the Government in May 2016, with the slogan – "Creative India; Innovative India"

➤ **Kashi Vishwanath Corridor**

Prime Minister Narendra Modi has laid the foundation stone for the *Kashi Vishwanath Corridor*.

• The project envisions a massive makeover of the holy shrine and its surrounding areas. This massive makeover is the first after the 1780 AD when the Maratha queen Ahilyabai Holkar of Indore renovated the temple and the area surrounding it.

• The proposed 50-feet corridor will directly connect Ganga's Manikarnika and Lalita Ghat to the Kashi Vishwanath Jyotirlinga Temple.

• Along the corridor, pilgrims and travellers will see a newly built museum and depicting Varanasi's ancient history and culture.

➤ **Government sells Rs 1,100 crore worth of 'enemy shares' in Wipro**

The government has sold enemy shares worth around Rs 1,150 crore in IT major Wipro to LIC and two other state-owned insurers.

Enemy Properties

• **Enemy properties are those properties that were left behind by the people who took citizenship of Pakistan and China**.

• There are 9,280 such properties left behind by Pakistani nationals and 126 by Chinese nationals.

• Of the total properties left behind by those who took Pakistani citizenship, 4,991 are located in Uttar Pradesh, the highest in the country. West Bengal has 2,735 such estates and Delhi 487.

• The highest number of properties left by **Chinese nationals is in Meghalaya (57). West Bengal has 29 such properties and Assam seven**.

• The estimated value of all enemy properties is approximately Rs 1 lakh crore.

INFRASTRUCTURE

➤ **India's First District Cooling System To Be Built In Amravati**

• A **UAE-based international cooling provider, Tabreed**, has entered into a 30-year concession with **Andhra Pradesh government to offer District Cooling solutions at Amravati**, the de facto capital of Andhra Pradesh. This will be Tabreed's first plant outside its GCC market.

• Tabreed's system will meet cooling requirements for the **State's Assembly, High Court, Secretariat and other government buildings that are currently under construction**.

- **This will be the first district cooling system in India.District** cooling system distributes thermal energy in the form of chilled water from a central source to multiple buildings through a network of underground pipes for use in space cooling.

- Compared to other **cooling systems, district cooling uses only 50 per cent of the primary energy consumption for cooling urban buildings**, thereby reducing CO_2 emissions.

> **7 islands in Andamans, Lakshadweep identified for seaplane operations**

- Four islands in the Andamans and three in Lakshadweep have been identified for seaplane operations, while private sector participation has been invited for tourism-based projects.

- **Swaraj Dweep, Shaheed Dweep, Hutbay and Long in Andaman and Nicobar Islands and Kavaratti, Agatti and Minicoy in Lakshadweep** have been identified for seaplane operations.

Connecting islands

The Centre has taken up various projects for the development of the Andaman and Nicobar Islands, and Lakshadweep. A look at some of them

Seaplane operation
- Islands in the Andamans: Swaraj Dweep, Shaheed Dweep, Hutbay and Long Island
- Islands in Lakshadweep: Kavaratti, Agatti and Minicoy

Other key infrastructure projects
- Operationalisation of Diglipur airport in the Andamans for civilian aircraft
- Construction of a new airport in Minicoy
- 'Middle Strait Bridge' on Andaman Trunk Road

Projects identified for private sector participation
- Eco-tourism in Smith Island and Long Island in the Andamans
- Tent city in Aves Island
- Tourism projects at Kadmat, Minicoy and Suheli Cheriyakara in Lakshadweep

- Island Development agency (IDA) was constituted in 2017 for the holistic development of islands. It will undertake holistic development in the project islands after giving due consideration to unique maritime and territorial bio-diversity of the islands. IDA is chaired by Union Home minister.

> **Afghanistan opens new export route to India through Iran's Chabahar Port.**

- Afghanistan began exports to India through the Chabahar port in Iran. This is the first time Afghanistan has exported goods to India bypassing the Pakistan route**.**

- **Goods brought at the port** can be easily transported to the Afghan border & distributed to different parts of Afghanistan via **Zaranj-Delaram highway.**

- India can export the **iron ore extracted** from the **Hajigak mines** in **Central Afghanistan** through Chabahar port.

BEING DIRECT: INDIA TO CHABAHAR
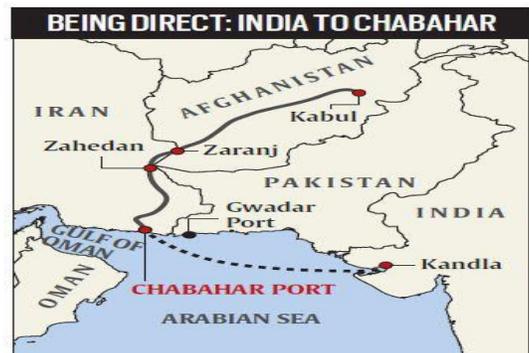
> **Visakhapatnam Strategic Petroleum Reserve (SPR) facility of Indian Strategic Petroleum Reserve Limited (ISPRL) operationalized**

- **SPR** :It is **storage of crude oil which would act as a cushion during any external supply disruptions** or **supply demand mismatch shock. By International Energy Agency (IEA) global standards , country should maintain a buffer of 90days import requirement.**

- Apart from this, India is planning to expand more strategic crude oil facilities in second phase at **Rajkot in Gujarat and Padur in Udupi district of Karnataka.**

For Details on the SPR, refer to the **Revision friendly current affairs (Jun-nov,2018) edition**

➢ **Cabinet approves Faster Adoption and Manufacturing of Electric Vehicles in India Phase II (FAME India Phase II)' for promotion of Electric Mobility in the country.**

- The scheme with total outlay of Rs 10000 Crores over the period of three years will be implemented with effect from 1st April 2019. This scheme is the expanded version of the present scheme titled 'FAME India1 which was launched on 1st April 2015, with total outlay of Rs. 895 crores.

- **The main objective of the scheme is to encourage Faster adoption of Electric and hybrid vehicle by way of offering upfront Incentive on purchase of Electric vehicle**s and also by way of establishing a necessary charging Infrastructure for electric vehicles**.**

Big Boost to Electric Cars
Scheme for FAME India Phase II Approved

- Encourage Faster adoption of Electric and hybrid vehicle by offering upfront **Incentive on purchase of Electric vehicles**

- To support **10 Lakhs e2-Wheelers, 5 Lakhs e3-Wheelers, 55000 4-Wheelers s and 7000 Buses**

- About **2700 charging stations** will be established in a grid of 3 km x 3 km

- Outlay of **Rs. 10,000 crores** over three years

CABINET DECISIONS 28 FEB 2019

➢ **Cabinet approves ₹1236 crore investment for Arun-3 hydro project**

- The **Arun-3 Hydro Electric project (900 MW) is located on Arun River in Sankhuwasabha** District of **Eastern Nepal**. The **Run-of-River scheme** envisages about 70 meter high concrete gravity dam and Head Race Tunnel (HRT) of 11.74 km with underground Power House, containing four generating units of 225 MW each on Left Bank.

- An MoU was **signed between Nepal government and SJVN Limited** for the project in March, 2008 for execution on **Build Own Operate and Transfer (BOOT) basis** for a period of 30 years.

SJVN's PROJECTS
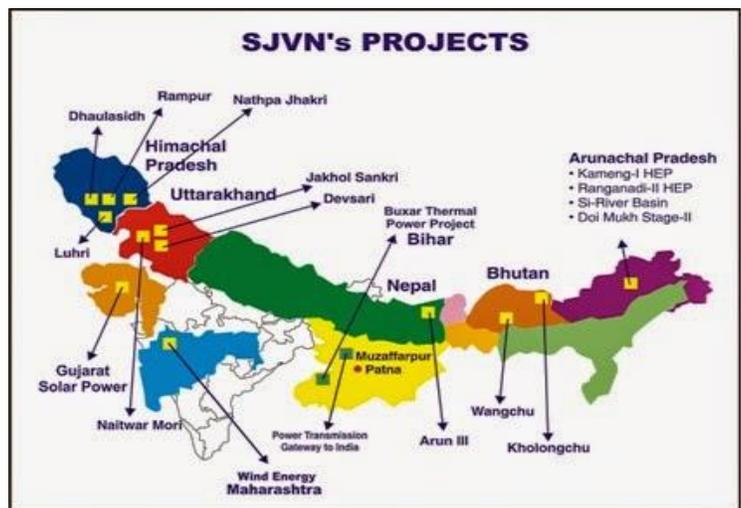
- **Run-of-river hydroelectricity** (**ROR**) or **run-of-the-river hydroelectricity** is a type of hydroelectric generation plant whereby little or no water storage is provided. **Run-of-the-river power plants** may have **no water storage** at all or a limited amount of storage.

➢ **Regional Air Connectivity – UDAN**

The Cabinet Committee on Economic Affairs (CCEA) has approved the **extension of time and scope for revival and development of un-served and under-served air strips of State Governments, Airports Authority of India (AAI), Civil enclaves, CPSUs, helipads and water aerodromes**. The revival of these un-served and under-served air strips will be carried out under the *Regional Connectivity Scheme (RCS) – UDAN (Ude Desh ka Aam Naagrik)*.

- **UDAN, launched in April 2017, is a flagship scheme of the Union Government to enable air operations** on unserved routes, connecting regional areas, to promote balanced regional growth and to make flying affordable for masses.

- The UDAN Scheme is a key component of the **National Civil Aviation Policy (NCAP)** which was launched in June 2016.

- The primary objective of RCS is to facilitate / stimulate regional air connectivity by making it cheap and affordable.

- Promoting affordability of regional air connectivity is envisioned under RCS by supporting airline operators through: Concessions and Financial (viability gap funding or VGF) support.

➢ **National Common Mobility Card**

Prime Minister Narendra Modi launched a *National Common Mobility Card (NCMC)*

- The inter-operable transport card would *allow the holders to pay for their bus travel, toll taxes, parking charges, retail shopping and even withdraw money*.

- **This card runs on RuPay card**. With the advent of this indigenously-developed and one-of-its-kind card, the country is no longer required to be dependent on foreign technology.

- *The stored value on card supports offline transaction across all travel needs* with minimal financial risk to involved stakeholders.

- **Ministry of housing & urban affairs** brought to the fore the National Common Mobility Card (NCMC) to enable seamless travel by different metros and other transport systems across the country besides retail shopping and purchases.

➢ **NuGen Mobility Summit 2019**

The *NuGen Mobility Summit 2019 will be held during November* at *Manesar, National Capital Region*.

- The Summit will be *organised by the International Centre for Automotive Technology (ICAT)* in association with many institutions including NATRiP.

- The objective behind the Summit is to share new ideas, global experiences, innovations and future technology trends for faster adoption, and development of advanced automotive technologies for a smarter and greener future.

- It will help in building a platform for bringing together all stakeholders in the automotive industry to understand global advancements in technologies.

HUMAN RESOURCE DEVELOPMENT

➢ **PETROTECH-2019**

- The PETROTECH series of International Oil & Gas Conference is a biennial platform for national and international experts in the oil & gas industry to exchange views and share knowledge, expertise, and experiences.

- Being held for the last over two decades with growing participation, PETROTECH-2019 is the 13th edition of the flagship event of the bustling Indian hydrocarbon sector that is a must-attend one in this part of the globe.

- The event aims to explore areas of growth in petroleum technology, exploration, drilling, production and processing, refining, pipeline transportation, petrochemicals, natural gas, LNG, petroleum trade, economics, legal and human resource development, marketing.

INTERNATIONAL AFFAIRS AND BILATERAL ISSUES

- ➢ **Geneva Conventions And Prisoners Of War(POW): All You Need To Know with regard to IAF Wing Commander Abhinandan Varthaman**

- **Adopted first in 1864 for the "Amelioration of the Condition of the Wounded in Armies in the Field,"** the Geneva Conventions, understood in the present form, evolved through centuries as an agreement that extensively defines the **basic rights of the civilian and military personnel imprisoned during the time of a war.**

- At present, the conventions comprise four treaties that mark out the benchmark of international law for humanitarian treatment in the event of a war and a total of 196 countries have ratified it.

- **POWs are usually members of the armed forces of one of the parties to a conflict who fall into the hands of the adverse party," the Convention states**. The status of POW only applies in international armed conflict.

- Parties to the conflict "are bound to send back" or repatriate PoWs, regardless of rank, who are seriously wounded or sick, after having cared for them until they are fit to travel".

- The provisions of the conventions apply in peacetime situations, in declared wars, and in conflicts that are not recognised as war by one or more of the parties. India has said its airstrikes were a "non-military" intelligence-led operation — both sides are bound by the Geneva Conventions. **This means the IAF officer is a prisoner of war, and his treatment has to be in accordance with the provisions for PoWs under the Geneva Conventions.**

- ➢ **U.K. should hand over Chagos islands to Mauritius: ICJ**

- **Britain has an obligation to end its administration of the Chagos Archipelago —**and complete **the process of decolonisation** of Mauritius, the **International Court of Justice (ICJ**) in The Hague has said in an advisory opinion that is a significant legal victory for Mauritius and other nations, including India, that supported its case.

- The Chagos Islands are home to the **U.S. military base of Diego Garcia**, under lease from the **United Kingdom** since the 1960s. The advisory opinion is unlikely to impact the U.S. military base: even assuming Britain acted on the advisory opinion. "Mauritius is committed to the continued operation of the base in Diego Garcia under a long-term framework.

- **Under an agreement struck in 1965**, in return for compensation to Mauritius and fishing rights, Britain has maintained control of the islands.

- **Headquartered at Hague, ICJ is the principle judicial organ of the UN established in 1945 succeeding the Permanent Court of Justice (established under League of Nations) .** It comprises 15 Judges, elected by UN General Assembly and Security Council for 9 year term. Five Judges are elected every 3 years to ensure continuity. It has no jurisdiction to deal with applications from individuals, NGOs or private groups and it rules only on the rights and obligations of States.

- ➢ **Russia, US suspend nuclear treaty in a diplomatic standoff sparking jitters over a new arms race**

The Intermediate-Range Nuclear Forces, or INF, Treaty, prohibits the production or testing of ground-launched cruise missiles with a range of 300 to 3,400 miles.

For details on the INF, refer to the Revision friendly current affairs (Jun-nov, 2018) issue

➢ **The EU is Launching "INSTEX" to Support Trade with Iran Despite U.S. Sanctions**

• The foreign ministers of **France, Germany, and the United Kingdom** announced, "in accordance with their resolute commitment and continued efforts to preserve the Joint Comprehensive Plan of Action ("JCPOA")," **the creation of INSTEX SAS (*Instrument for Supporting Trade Exchanges*), a Special Purpose Vehicle aimed at facilitating legitimate trade between European economic operators and** Iran.

• INSTEX is financed and managed by France, Germany, and the U.K. (the so called "E3"), and only backed by the EU Commission.

• INSTEX would operate as a Euro-denominated clearing house for Iran to conduct trade with European companies, acting outside the global financial system in an attempt to protect European companies from U.S. sanctions enforcement.

• The details of INSTEX and its functioning are not yet available, since special purpose vehicle is not yet operative & it will also require creation of a corresponding entity in Iran in order to be operative.

➢ **Macedonia set to become NATO's 30th member**

• The Republic of Macedonia on signed an accession agreement with the **North Atlantic Treaty Organization (NATO)**. This begins the process of Macedonia joining NATO, which must now be finalized via ratification by current member states**.**

• **Article 10 of the North Atlantic Treaty calls for unanimous approval from member states after the receipt of accession document**s. For many years, a dispute between Greece and Macedonia over the name of the former Yugoslav republic made such approval unlikely**.**

• In June the two countries signed the Treaty of Prespa, in which Macedonia agreed to change its name to North Macedonia. **If all member states approve, North Macedonia will be the thirtieth nation to join NATO.**

For Details regarding NATO refer to the Quick Revision Current affairs (Jun-Nov,2018) magazine.

➢ **7Th WGS 2019: World Government Summit in Dubai Ushers in New Era**

The World Government Summit is a global platform dedicated to shaping the future of governments worldwide. The Summit:

• Sets the agenda each year for the next generation of governments, focusing on how they can harness innovation and technology to solve universal challenges facing humanity.

• Provides a unique platform to showcase and exchange best practices and smart solutions to the challenges that nations face.

- It comprises a wide network of leaders of the public and private sectors, and inspires them to think collectively and creatively about disruptive intersections between government and innovation, with the ultimate goal of promoting development and prosperity.

- **A special track focuses on the SDGs. The "SDGs in Action @WGS" is organized in collaboration with the United Nations, the World Bank and the OECD and brings together a range of stakeholders from around the world** – subject-matter experts, international organizations, governments, youth groups, NGOs, academia and private sector – in order to break down silos and find innovative means to progress the 2030 Agenda for Sustainable Development.

> **53rd Edition of "Know India Programme"**

- The 53rd edition of Know India Programme for Young Indian Diaspora involves 40 participants (24 female and 16 males) from Fiji, Guyana, Mauritius, Portugal, South Africa, Sri Lanka, Suriname and Trinidad & Tobago. The **partner states** of this edition are **Maharashtra and Daman & Diu.**

- **The Know India Programme is organised by the Ministry of External Affairs, Government of India with the objective of familiarizing the India Diaspora Youth, in the age group of 18-30 years**, with developments and achievements made by the country and **bringing them closer to the land of their ancestors.** The programme provides a unique forum for students and young professionals of India origin to visit India, share their views, expectations and experiences and to bond closely with the contemporary India.

> *Malaysia has ratified the Rome Statute making it the 124th State party to the International Criminal Court (ICC)*.

- The International Criminal Court (ICC), **located in The Hague, is the court of last resort for prosecution of genocide, war crimes, and crimes against humanity**.

- **It is the first permanent, treaty based, international criminal court** established to help end impunity for the perpetrators of the most serious crimes of concern to the international community.

- Its founding treaty, **the Rome Statute, entered into force on July 1, 2002**.

- **Funding:** Although the Court's expenses are funded primarily by States Parties, it also receives voluntary contributions from governments, international organisations, individuals, corporations and other entities.

> **UN Security Council**

France, which assumed the Presidency of the United Nations Security Council for the month of March, has reiterated its support for India as the permanent member of the powerful UN body. The nation also reiterated its support for Germany and Japan as permanent members of an expanded UNSC.

> **Indo-pacific Regional Dialogue**

*The second edition of **Indo-Pacific Regional Dialogue (IPRD) – 2019** was held in New Delhi*.

- *Aim is to provide* a platform for substantive and insightful discussions pertaining to the geopolitical developments affecting the maritime domain of the Indo-Pacific, and provide policy-relevant inputs to the policy-makers and the public at large.

- The idea of an Indo-Pacific Regional Dialogue (IPRD) was first conceptualised and conducted in 2018, **as the apex level conference of the Indian Navy, organised by the National Maritime Foundation as the Navy's Knowledge Partner**.

- The **permanent theme of this annual dialogue is a review of India's opportunities and challenges in the Indo-Pacific region**.

- The **aim is to focus attention on the Indo-Pacific, as a maritime geographical-entity**, while deliberating aspects of great relevance to regional geopolitics.

➢ **Exercise Sampriti -2019**

As part of the ongoing India Bangladesh defence cooperation, a *joint military exercise Sampriti-2019 will be conducted at Tangail, Bangladesh*.

- Exercise Sampriti-2019 is an important bilateral defence cooperation endeavour between India and Bangladesh and will be the 8th edition of the exercise which is hosted alternately by both countries.

- The exercise is aimed **to strengthen and broaden the aspects of interoperability and cooperation between the Indian and Bangladesh Armies**.

- The exercise will involve tactical level operations in a counter insurgency and counter terrorism environment under the UN mandate.

➢ India has decided to extend its *National Knowledge Network (NKN) to Bangladesh*.

- NKN is a multi-gigabit pan-India network which facilitates development of India's communications infrastructure, stimulates research and creates next generation applications and services.

- With its multi-gigabit capability, NKN aims to connect all universities, research institutions, libraries, laboratories, healthcare & agricultural institutions across the country to address such paradigm shift.

- It enables collaboration among researchers from different educational networks such as TEIN4, GARUDA, CERN and Internet2. It also enables sharing of scientific databases and remote access to advanced research facilities. The leading mission oriented agencies in the fields of nuclear, space and defence research are also part of NKN.

➢ **India Launches third IT corridor in China**

- India has launched its *third IT corridor in China*. The corridor will facilitate partnerships between Indian and Chinese companies.

- The National Association of Software and Services Companies (NASSCOM) entered into a partnership with China's Xuzhou city from Jiangsu Province in China to help develop the IT corridor.

- The primary aim of this IT corridor will be to facilitate partnerships between Indian & Chinese companies.

➢ *Sharda Peeth corridor*

Pakistan has given its green signal for Sharda Peeth corridor. *The Sharda Peeth corridor, when opened, will be the second religious tract after Kartarpur corridor in Pakistan-controlled territory that will connect the two neighbouring nations*.

- The temple is revered by **Kashmiri Pandits** among other Hindus across the globe.

- It was once regarded as a major centre of higher **learning of Vedic works, scriptures and commentaries**.

- The temple is also **one of the 18 Maha Shakti Peethas, or a "Grand Shakti Peethas".**

- It is considered to be the abode of Hindu Goddess Saraswati.

- **The temple has close resemblance with the Martand temple** (another religious site in Anantnag) in architecture, design and construction style.

➢ **Kaladan Project**

The Indian and Myanmar's armies have, in a coordinated operation, destroyed at least 10 camps belonging to an insurgent group in Myanmar, which had become a threat to India's mega *Kaladan*

Project in the neighbouring country. The operation was also undertaken keeping in view the safety of Indian workers engaged in the project. *The military action carried out was codenamed Operation Sunrise*.
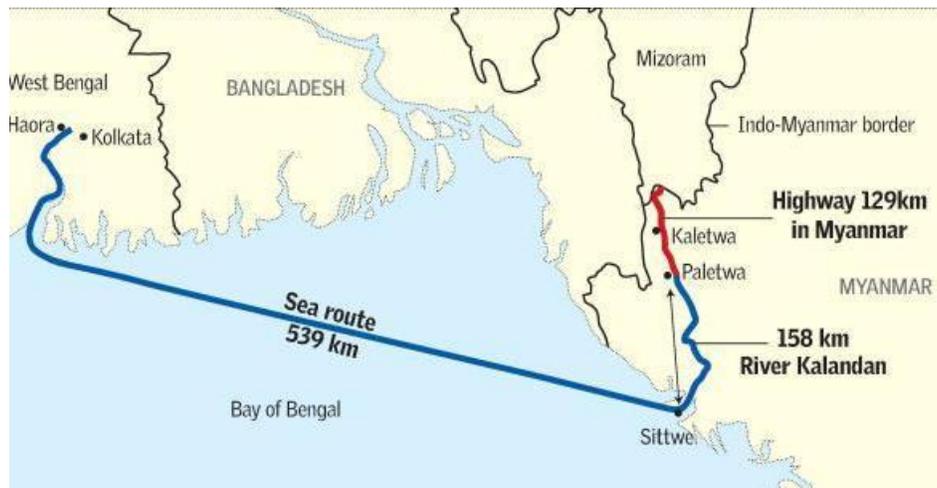
- The Kaladan project connects *Sittwe Port in Myanmar to the India-Myanmar border*.

- The project was jointly initiated by India and Myanmar *to create a multi-modal platform for cargo shipments from the eastern ports to Myanmar and to the North-eastern parts of the country through Myanmar*.

- It is expected to open up sea routes and promote economic development in the North-eastern states, and also add value to the economic, commercial and strategic ties between India and Myanmar. *This project will reduce distance from Kolkata to Sittwe by approximately 1328 km and will reduce the need to transport good through the narrow Siliguri corridor, also known as Chicken's Neck*.

➢ *India-Africa Institute of Agriculture and Rural Development (IAIARD) in Malawi*

India has signed an agreement with the National Bank for Agriculture and Rural Development Consultancy Service (NABCONS) for setting up the *India-Africa Institute of Agriculture and Rural Development (IAIARD) in Malawi, a landlocked country in southeastern Africa*.

- IAIARD will be *a Pan-African Institute* wherein trainees from Malawi and other African countries will be trained to develop their human resources and build their capacity.

- The entire expenditure on India faculty, their travel, logistics and training course expenses for students from other African countries will be borne by the Indian Government for an initial period of three years.

- IAIARD will develop training programmes in the areas of micro-financing and agro-financing, among others.

➤ **Global Report on Food Crises2019**

It is *a report released jointly by the Food and Agriculture Organization (FAO), World Food Programme (WFP) and EU.*

- Approximately 113 million people in 53 countries experienced high levels of food insecurity last year. These crises are primarily driven by conflict and climate-related disasters.

- The number going chronically-hungry has remained well over 100 million over the past three years, with the number of countries affected, rising.

- **According to the report, nearly two-thirds of those facing acute hunger come from just eight countries:**Afghanistan, the Democratic Republic of the Congo, Ethiopia, Nigeria, South Sudan, Sudan, Syria and Yemen.

- Climate & natural disasters pushed another 29 million people into acute food insecurity in 2018 and that number excludes 13 countries – including North Korea & Venezuela – because of data gaps.

➤ **Global Cooling Coalition**

The first-ever *global coalition on clean and efficient cooling* was launched at the recently held *First Global Conference on Synergies between the 2030 Agenda and Paris Agreement in Copenhagen, Denmark*.

- The Global Cool Coalition is **a unified front that links action across the Kigali Amendment, Paris Agreement and Sustainable Development Goals**.

- It is expected to inspire ambition, identify solutions and mobilise action to accelerate progress towards clean and efficient cooling.

- Besides the UN, it is supported by the Climate and Clean Air Coalition, the Kigali Cooling Efficiency Program and Sustainable Energy for All (SEforALL).

- It includes government officials from Chile, Rwanda, Denmark as well as leaders from civil society, research and academia.

➤ **Order of Zayed**

UAE awards PM Narendra Modi with Highest Civilian Honour. PM Modi has been awarded in recognition of efforts in giving "a big boost" to bilateral relations between both the countries.

- The 'Order of Zayed' is **the highest civil decoration instituted by the UAE**.

- 'Zayed' is **the founding father of the United Arab Emirates**.

- It is **awarded to Heads of Government/Head of State for their international relations with UAE**.

➤ *Comprehensive Convention on International Terrorism (CCIT)*

- In the wake of growing threats and acts of terrorism across the world, India and Bolivia have called for an early finalisation of *Comprehensive Convention on International Terrorism (CCIT)*.

- The Comprehensive Convention on International Terrorism is a proposed treaty which intends to criminalize all forms of international terrorism and deny terrorists, their financiers and supporters access to funds, arms, and safe havens. It is a draft proposed by India in 1996 that is yet to be adopted by the UNGA.

Convention call for

✓ Universal definition of terrorism: no good terrorist or bad terrorist.

✓ Ban on all groups regardless of country of operation, cut off access to funds and safe havens.

✓ Prosecution of all groups including cross border groups.

✓ Amending domestic laws to make cross-border terror an extraditable offence.

✓ It also addresses, among other things, the issue of Pakistan's alleged support for cross-border terrorism in south Asia.

➢ **Generalized System of Preferences (GSP)**

The move by the United States (U.S.) to terminate India's designation as beneficiary developing country under the Generalized System of Preferences (GSP) programme because it no longer complied with the statutory eligibility criteria, is likely to affect plastic exports from India.

• Some of the product segments which may face a decline in exports to U.S. due to withdrawal of GSP concessions include plastics raw materials, consumer and houseware items and polyester films.

• Recently, U.S. President Donald Trump decided to rescind the benefits Indian exports enjoy under the Generalised System of Preferences (GSP) programme.

• **The Generalized System of Preferences (GSP) is a U.S. trade program designed to promote economic growth in the developing world by providing preferential duty-free entry for up to 4,800 products from 129 designated beneficiary countries and territories**.

• The objective of GSP was to give development support to poor countries by promoting exports from them into the developed countries.

➢ **India gains access to Bolivian Lithium Reserves**

India and Bolivia have signed an agreement for the development and industrial use of lithium, a prime component used to power electric vehicles and cell phones.

• India and Bolivia agreed to forge a mutually beneficial partnership to facilitate Bolivian supplies of lithium Carbonate to India and foster joint ventures for lithium battery/cell production plants in India.

• This agreement will make **Bolivia, which is known to have one-fourth of the world's lithium reserves, one of the major provider of metal for India's e-mobility and e-storage needs**.

• The agreement **facilitates mechanisms for the commercialization of Lithium Carbonate and Potassium Chloride produced in Bolivia by Yacimientos de Litio Bolivianos Corporación (YLB – Corporación)**.

➢ **US-India strategic partnership**

US lawmakers introduce new legislation to strengthen US-India strategic partnership- *Bill H R 2123*.

• If enacted, **the new bill would ensure that the US State Department treats India as a NATO ally for the purposes of the Arms Export Control Act**.

• **The law would send a powerful signal that defence sales to India should be prioritised according to US-India Strategic Partnership Forum**, which had worked on this important legislation.

- **The legislation bolsters national security and helps ensure full alignment between the Department of Defence and the Department of State**.

➢ *Russia's highest civilian award – the "Order of the Holy Apostle Andrew the First"*

Russia's highest civilian award – the "Order of the Holy Apostle Andrew the First," will be awarded to PM Narendra Modi for his work on bilateral ties.

- The Order of the Holy Apostle Andrew the First is awarded to prominent government and public figures, prominent representatives of science, culture, art and various sectors of the economy for "exceptional services that contribute to the prosperity, greatness and glory of Russia".

- **It was first awarded** by former Russian Tsar 'Peter the Great' in 1698 and subsequently discontinued. In 1998, former President Boris Yeltsin reinstated the honour by a presidential decree.

- **Previous recipients include** Chinese President Xi Jinping, and presidents of Azerbaijan and Kazakhstan, former Soviet leader Mikhail Gorbachev and author Aleksandr Solzhenitsyn.

DEFENCE AND SECURITY

- ➤ **Defence Acquisition Council approved Indigenous construction of Six Project 75(I) submarines under strategic partnership model**

- **Project 75 India (P-75I)** is **follow-on of the Project 75 Kalvari-class submarines** for the Indian Navy, the Indian Navy intends to acquire **six diesel-electric submarines**, which will also feature advanced Air-independent propulsion (AIP) systems to enable them to stay submerged for longer duration and substantially increase their operational range

- **The project to construct the six submarines will be implemented under the strategic partnership (SP) model** which provides for **roping in private firm to build select military platforms in India in partnership with foreign defence manufacturers.**

- **The P75I project is part of a 30-year submarine building plan that ends in 2030**. According to this, India has to build 24 submarines — 18 conventional submarines and six nuclear-powered submarines (SSNs).

- The SP model has **four segments — submarines, single engine fighter aircraft, helicopters and armoured carriers/main battle tanks** — which would be specifically opened up for the private sector.
- **A 49 per cent FDI cap** has been kept for setting up ventures under this for the production of defence platforms and the companies have to be in control of Indian entities

- ➤ **INS Trikand, a front-line warship of Indian Navy, participates in Exercise Cutlass Express**

- The aim of the exercise was to improve law enforcement capacity, promote regional security and progress inter-operability between the armed forces of the participating nations for the purpose of interdicting illegal maritime activity in the Western Indian Ocean**.**

- During the exercise, Naval, Coast Guard and Marine Police personnel from a number of East African countries were jointly trained by mentors from USA, India, and Netherlands, with support of international organisations like the International Maritime Organisation (IMO), Combined Maritime Force (CMF) and European Naval Forces (EUNAVFOR).

- **INS Trikand is equipped with a versatile range of sensors and weapons enabling her to address threats in all the three dimensions – air, surface and sub-surface.**

- ➤ **2019 Pulwama attack**

- On 14 February 2019, a convoy of vehicles carrying security personnel on the Jammu Srinagar National Highway was attacked by a vehicle-borne suicide bomber at Lethpora (near Awantipora) in the Pulwama district, Jammu and Kashmir, India.

- The attack resulted in the **deaths of 40 Central Reserve Police Force (CRPF) personnel** and the attacker. **The responsibility for the attack was claimed by the Pakistan-based Islamist militant group Jaish-e-Mohammed**. The attacker was Adil Ahmad Dar, a local from Pulwama district, and a member of Jaish-e-Mohammed.

- India revoked Pakistan's most favoured nation status.The customs duty on all Pakistani goods imported to India were raised to 200%.

- On 26 February, twelve Mirage 2000 jets of the Indian Air Force crossed the Line of Control and dropped bombs into Balakot, Pakistan. India claimed that it attacked a Jaish-e-Mohammed training camp and killed a large number of terrorists, reported to be between 300 and 350.

- The **Central Reserve Police Force** is the **largest central paramilitary force** under the Ministry of Home Affairs. It is used to supplement the local police forces in contingencies and for countering insurgencies.

➤ **Milan-2T anti-tank missiles**

- An anti-tank missile, anti-tank guided missile (ATGM), anti-armour guided missile or anti-tank guided weapon (ATGW) is a missile that is created to destroy vehicles that are heavily armoured.

- While the Milan was first produced in the '70s, the Milan-2T is of more recent vintage-- it was developed as a counter to 'reactive armour' in the '90s.

- Some of the indigenous anti-tank missiles that the DRDO is working which are at various stages of completion **include NAG, HELINA, SANT (Stand-off Anti Tank) Missile, Cannon-launched Laser Guided Missile (CLGM), SAMHO, AMOGHA-1, AMOGHA-2, AMOGHA-3.**

- MILAN is a **portable medium-range, anti-tank weapon** manufactured by Euromissile, based in **Fontenay-aux-Roses** in France. **MILAN 2T and MILAN 3 missiles are armed with a tandem charge for use against reactive armour.**

➤ **In a first, IAF commissions aerial surveillance**

- The Indian Air Force (IAF) has commissioned the **development of an aerial surveillance system for monitoring suspicious moments under dense foliage** cover along the international border and some parts within the country.

- This **hyper spectral imagery programme, a first for the country**, seeks to locate and identify suspicious movements and is expected to be operational in the next two years.
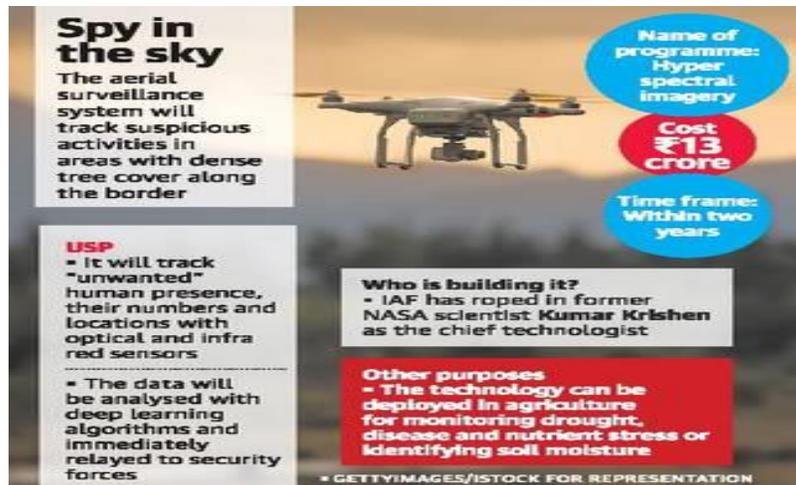
- This is a **unique patent application**, which will help detect or identify the presence of a human below trees, dense foliage, shrubs or inside a structure, whether it is day or night. It can detect human presence from air even if there a cloud cover, dense fog or snow cover.

➤ **Man Portable Anti-Tank Guided Missile (MPATGM)**

- MPATGM is third-generation anti-tank guided missile (ATGM) indigenously developed by DRDO.

- It has strike range of 2.5 km. It weighs around 14.5 kg to maintain man portability. It is capable of being fired from shoulder and can be used during day and night. It has minimum lateral centre and gravity offset.

o It works on fire and forget principle and is known for its top attack capabilities. It is effective against both stationary and moving targets. It will be deployed in infantry and parachute battalions of Indian Army

➤ **Indigenous gun trials of the Army to enter next stage by June**

The development of the indigenously-designed heavy artillery gun, the **Advanced Towed Artillery Gun System (ATAGS),** has advanced to a stage where user-assisted trials of the gun are likely to start by June,2019.

Firing on all cylinders

- Advanced Towed Artillery Gun System (ATAGS) is a 155mm, 52 calibre gun, developed by Defence Research and Development Organisation (DRDO) in a consortium model
- One prototype has been built in partnership with Tata Power (Strategic Engineering Division) and another with Bharat Forge
- Two guns from each company are undergoing trials; two more guns to join trials later
- There is a sanction for production of 10 guns as part of the development process
- The gun currently weighs about 18 tonnes while the ideal weight is 14-15 tonnes

- The defence Ministry has approved purchase of 150 guns at an approximate cost of ₹3,365 crore
- The Army is in the process of finalising the Preliminary Specifications Qualitative Requirements (PSQR) which details the essential parameters, which should be ready by July 2019
- The gun is presently undergoing development trials. User assisted trials will begin from May-June 2019

■ **KEY FEATURES**
Electric drive
High mobility
Quick deployability
Auxiliary power mode
Advanced communication system
Automated command
Control system
Six round magazine instead of a standard three round magazine

➤ **BOLD- QIT Project**

- Project **BOLD-QIT (Border Electronically Dominated QRT Interception Technique)** under **CIBMS (Comprehensive Integrated Border Management system)** has been inaugurated on **India-Bangladesh border in Dhubri District of Assam**.

- BOLD-QIT is the project **to install technical systems under the Comprehensive Integrated Border Management System (CIBMS)**, which enables BSF to equip Indo-Bangla borders with different kind of sensors in unfenced riverine area of Brahmaputra and its tributaries

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Comprehensive Integrated Border Management System (CIBMS)
- The concept of CIBMS is the *integration of manpower, sensors and command and control to improve situational awareness and facilitate quick response to emerging situations*.
- Among major components of CIBMS is the *'virtual fence'*. The second component is the *command and control*, which will help in optimum use of resources for border management. Another component is *power management* to keep CIBMS running.

➤ **Flood Management and Border Areas Programme (FMBAP)**

The Union Cabinet has approved the *"Flood Management and Border Areas Programme (FMBAP)"* for Flood Management Works in entire country and River Management Activities and works related to Border Areas for the period 2017-18 to 2019-20 with a total outlay of Rs.3342.00 crores.

- The Scheme "FMBAP" has been framed by **merging the components of two continuing XII Plan schemes titled "Flood Management Programme (FMP)" and "River Management Activities and Works related to Border Areas (RMBA)"**.

- **The aim of Scheme** is to assist the State Governments to provide reasonable degree of protection against floods in critical areas by adopting optimum combination of structural and non-structural measures and enhancing capabilities of State/ Central Government officials in related fields.

- The works under the scheme will **protect valuable land from erosion and flooding and help in maintaining peace along the border**.

- The Scheme aims at **completion of the on-going projects already approved under FMP**. Further, the scheme also caters to Hydro-meteorological observations and Flood Forecasting on common rivers with the neighbouring countries.

- **The Scheme also includes survey and investigations, preparation of DPR etc. of water resources projects on the common rivers with neighbouring countries** like Pancheshwar Multipurpose Project, Sapta Kosi-Sun Kosi Projects in Nepal which would benefit both countries

➢ *Border Area Development Programme (BADP)*

The Jammu and Kashmir government has released Rs 524.25 lakhs under *border area development programme (BADP)* for utilization during the current financial year 2018-19.

- *The Border Area Development Programme (BADP) has been implemented through 17 States* (viz. Arunachal Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tripura, Uttar Pradesh, Uttarakhand and West Bengal) which constitute the International Land Borders.

- The main objective of the BADP is *to meet the special developmental needs and wellbeing of the people living in remote and inaccessible areas situated near the international border and to saturate the border areas with the entire essential infrastructure* through convergence of Central/ State/ BADP/ Local schemes and participatory approach.

ENVIRONMENT AND ECOLOGY

➢ **Melting of Himalayan Glaciers**

• **The 'Hindu Kush Himalaya Assessment' released by the Kathmandu-based International Centre for Integrated Mountain Development (ICIMOD)** warns that even if efforts are made to limit global warming to 1.5 degree Celsius by the end of the Century, the Hindu Kush Himalaya will warm by around 1.8 degree Celsius.

• According to the report, glaciers in the **Hindukush Himalayan region which spans 8 countries in South Asia from Afghanistan to Myanmar** are doomed to melt due to climate change with serious consequences for almost 2 billion people

• **Hindu Kush Himalayan region glaciers feed into river systems including the Indus, Ganga, Yangtze, Irrawaddy and Mekong**. These water supplies are closely dependent on both rainfall during the monsoon season and trickling melt water from glaciers during the dry season

• **Called the Third Pole, the Hindu Kush Himalayan region together with China's Tien Shan Mountains holds the most ice outside the North and South Pole**.

• **Temperatures are rising faster in the mountains than at the lower elevations and this phenomenon is called Elevation dependent warming.**

➢ **Polar vortex freezes U.S. Midwest**

• A blast of Arctic air , **known as the polar vortex is a stream of cold air** that spins around the **stratosphere over the North Pole**, but whose **current has been disrupted and is now pushing south into the United States.**
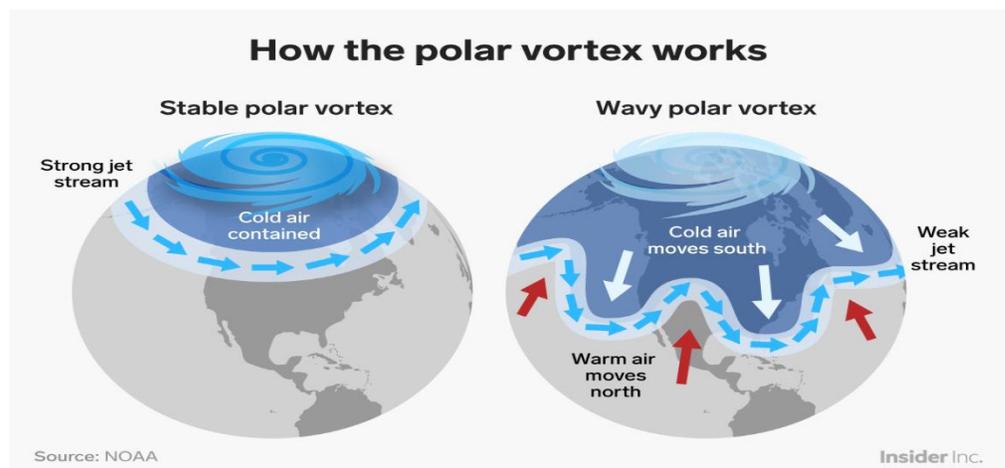
• The polar vortex is a large area of low pressure and cold air surrounding both of the Earth's poles. It always exists near the poles, but weakens in summer and strengthens in winter. The term "vortex" refers to the counter-clockwise flow of air that helps keep the colder air near the Poles.

➢ **Indian Sundarbans named as a Wetland of International Importance**

• The Sundarban Reserve Forest (SRF) in India, located within the largest mangrove forest in the world, the Sundarbans, is now a Wetland of International Importance, making it the largest protected wetland in the country.

• **Ramsar Convention is the only international treaty focused on wetlands**. The last Indian site that was designated as a Wetland of International Importance was Gujarat's **Nalsarovar Bird Sanctuary in 2012.**

- It is located in delta region of **Padma, Meghna and Brahmaputra river basins.**

- **They are the only mangrove Habitat which supports a significant population of tigers (Royal Bengal Tigers), and they have unique aquatic hunting skills.**

- The Sundarbans was made a **UNESCO World Heritage Site** in 1987.

The **Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat** is an international treaty for the conservation & sustainable use of wetlands. It is also known as **Convention on Wetlands.**

➢ **Climate change could lead to decline of underwater kelp forests by impacting their microbiome** In Pic: global distribution of **Kelp Forests.**

- Predicted ocean warming and acidification can change microbes on the kelp surface, leading to disease and potentially putting fisheries at risk.
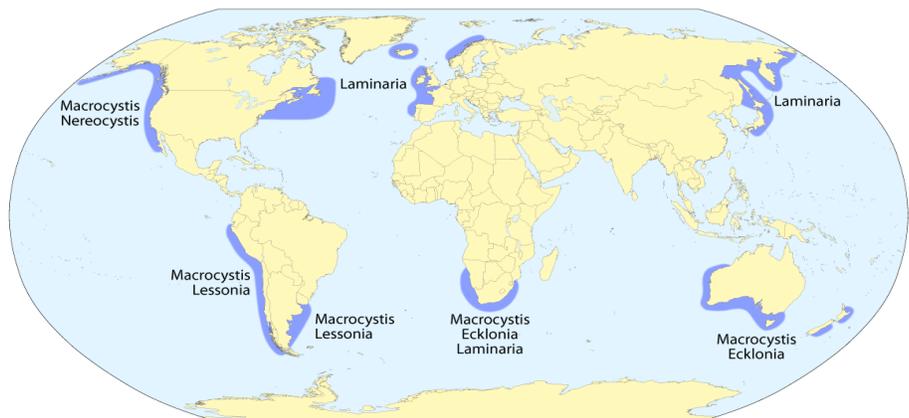
- **Climate change is affecting biodiversity at a global scale. In the marine realm, ocean warming and acidification** are pushing dominant habitat-forming species, such as corals and large seaweeds, into decline, affecting biodiversity.

- Blistering, bleaching and eventually degradation of the **kelp's** surface is impacting the species' ability to photosynthesise and potentially survive. Kelps forests are important for fisheries.

- Kelp forests are underwater areas with a high density of kelp. Physically formed by brown macroalgae, kelp forests provide a unique, three-dimensional habitat for marine organisms.

➢ **Landscape-level approach necessary to address human-elephant conflicts**

- A study involving close monitoring of elephants on daily basis for two years in Karnataka has concluded that landscape-level management is necessary for mitigating human-elephant conflicts.

- **India** has the **largest Asian elephant population in the world**. Elephants tend to move across diverse habitats for feeding and breeding.

- **There are large coffee plantations, tea estates, monoculture plantations adjoining protected areas**. Wild animals like elephants and leopard tend to venture into these human-modified landscapes which ultimatelylead to human-animal conflict. Studies have shown Karnataka holds the largest elephant population in India. It is also known for its predominant coffee cultivation.The region is witnessing increasing man-animal conflicts

- **Landscape-level management** strategy **means that care should be taken while making changes in the land-use practices in habitats such as coffee, agriculture or clear felling of monoculture plantations** of *Acacia, Eucalyptus* or forest patches etc as it may have negative effects on elephant conservation or aggravate human-elephant conflict.

➢ **African Cheetahs to be translocated to India: NTCA**

• The National Tiger Conservation Authority (NTCA) told a bench of the Supreme Court, that African cheetahs would be translocated in **India from Namibia and would be kept at Nauradehi wildlife sanctuary in Madhya Pradesh.**

• **The International Union for Conservation of Nature (IUCN)** had given a 'no objection' for the translocation.

For details on **cheetah Introduction Project refer to Quick Revision (Jun-Nov,2018) document** .

➢ **New Delhi Declaration on Asian Rhinos 2019 adopted at the Second meeting of 2ⁿᵈ Asian Rhino Range Countries**

• **India and four rhino range nations have signed a declaration 'The New Delhi Declaration on Asian Rhinos 2019'** for the conservation and protection of the species.

• **India** will collaborate with **Bhutan, Nepal, Indonesia and Malaysia** to increase the population of three species of Asian rhinos, including the Greater one-horned rhinoceros found in the Indian sub-continent.

• The **declaration was signed to conserve and review the population of the Greater one-horned, Javan and Sumatran rhinos** every four years to reassess the need for joint actions to secure their future.

• **Indian rhino vision (IRV) 2020 is being implemented by the Department of Environment and Forest Assam, in partnership with Bodo Autonomous Council**. It is supported by **WWF India, WWF areas (Asian Rhino and Elephant action strategy) program, the international rhino foundation (IRF), US fish and wildlife service**, save the rhino s campaign of zoological institutions worldwide, and several NGOs and local conservation groups.

• **IRV 2020** hopes to raise the number of rhinos in Assam to 3,000 by 2020 and spread them over seven of the state's protected areas: **Kaziranga, Pobitora, Orang national park, Manas national park, Laokhowa wildlife sanctuary, Burachapori wildlife sanctuary and Dibru Saikhowa wildlife sanctuary.**

➢ **Indus river dolphin found in the Beas River declared as state aquatic animal of Punjab**

• Already, Punjab has **Black Buck as its state animal, and Baaj**, also known as northern **goshawk (accipiter gentilis)**, as **the official state bird.**

• As per the WWF figures, the number of dolphins presently is 1816, mostly found in the lower parts of the Indus River in Pakistan between **Chashma and Kotri barrages** in the Indus River.

• In Punjab, the **Indus River Dolphins are found mainly in the Sutlej and Beas rivers**. **Pakistan has already initiated various steps to protect and conserve the Indus River Dolphin, through a community-based conservation approach**.

• The state also gave approval to declare the **Kanjli Wetland and the holy Kali Bein River** as a **wildlife conservation reserve** to mark the historic 550th birth anniversary of Sikhism founder Guru Nanak Dev.

• The **sacred Kali Bein River** was associated with **the life of the Sikh Guru**, who got enlightenment while **taking a dip in the holy river.**

➢ **Workshop on MoEFCC-Global Environment Facility, UNDP Small Grants Programme(SGP) held at Delhi**

• **UNDP has been supporting the Ministry of Environment, Forest and Climate Change (MoEFCC) in implementing the Global Environment Facility (GEF)** and financed **Small Grants Programme (SGP) in India since 1997**.

• **Projects under the SGP are implemented through a National Host Institution – Centre for Environment Education (CEE), and other NGO partners** and stakeholders that has presence in different parts of the country.

• **This initiative provides direct financial and technical support** to **communities and Civil Society Organizations** for various projects that conserve and restore the environment while enhancing people's well- being and livelihoods.

• This program was launched alongside the **Rio Earth Summit** in 1992.

➢ **UN report, '*Environmental Rule of Law, First Global Report*'**

• It is an important assessment on how countries in the world are destroying their own well-established legal systems by poor enforcement.

• The UN Environment report found that despite a 38-fold increase in environmental laws put in place since 1972, failure to fully implement and enforce these laws is one of the greatest challenges to mitigating climate change, reducing pollution and preventing widespread species and habitat loss.

• It pointed out that a second backlash has been to restrict efforts by civil society. In the past 20 years, a growing number of countries have imposed legal restrictions on civil society involvement and funding.

• Other than environmental laws, the report found numerous cases in India which demonstrate the use of the constitutional right-to-life provision, article 21, to elevate environmental concerns

• **The rule of law in environmental matters is essential for equity in terms of the advancement of the Sustainable Development Goals (SDGs),** the provision of fair access by assuring a rights-based approach, and the promotion and protection of environmental and other socio-economic rights.

➢ **Pradhan Mantri JI-VAN Yojana (Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran)**

Under this Yojana, 12 Commercial Scale and 10 demonstration scale Second Generation (2G) ethanol Projects will be provided a Viability Gap Funding (VGF) support in two phases:

a) Phase-I (2018-19 to 2022-23): wherein six commercial projects and five demonstration projects will be supported.

b) Phase-II (2020-21 to 2023-24): wherein remaining six commercial projects and five demonstration projects will be supported.

• **The scheme focuses to incentivise 2G Ethanol sector** and support this nascent industry by creating a suitable ecosystem for setting up commercial projects and increasing Research & Development in this area.

• The ethanol produced by the scheme beneficiaries will be mandatorily supplied to Oil Marketing Companies (OMCs) to further enhance the blending percentage under EBP Programme.

- Ministry of Petroleum & Natural Gas **MoP&NG** has targeted to achieve 10% blending percentage of Ethanol in petrol by 2022.

- **Centre for High Technology (CHT)**, a technical body under the **aegis of MoP&NG**, will be the implementation Agency for the scheme.

Government of India launched Ethanol Blended Petrol (EBP) programme in 2003 for undertaking blending of ethanol in Petrol to address environmental concerns due to fossil fuel burning, provide remuneration to farmers, subsidize crude imports and achieve forex savings.

➢ **Super-Efficient Air Conditioning programme launched by EESL**

- **Energy Efficiency Services Limited (EESL), a joint venture of four National Public Sector Enterprises under Ministry of Power, Government of India**, launched its Super-Efficient Air Conditioning Programme for residential and institutional consumers.

- These Super-Efficient Air Conditioners are 40 percent more efficient than, but priced comparably with, the 3-star ACs currently available in the market.

- The programme directly addresses the prospect of the nearly four-fold increase in energy consumption from buildings and cooling appliances in India by 2032, while also addressing goals of **India's Cooling Action Plan and Hydrochlorofluro carbons Phase Out Management Plan, enabling achievement of India's targets under the Kigali and Paris Agreements.**

- **India is the first country in world to develop such a document (ICAP)**, which addresses cooling requirement across sectors and lists out actions which can help reduce the cooling demand.

- Dedicated web portal EESLmart.in launched for online sale of energy efficient appliances. the website will also allow customers to purchase other appliances distributed by EESL, including induction cookstoves and products **sold under the UJALA programme - 9-Watt LED bulbs, LED luminaries, and BEE 5-star rated energy efficient fan**s.

- **EESL's investment in the programme is partially supported by a grant from the Global Environment Facility (GEF), an independent financing mechanism that was established on the eve of the 1992 Rio Earth Summit to address global environmental issues.**

- Further, **Asian Development Bank (ADB)** is **providing necessary grant support and loan** while **United Nations Environment (UNEP)** is providing technical assistance support to the **Super-Efficient AC programme.**

> **Kigali Agreement**: As per the agreement, these countries are expected to reduce the manufacture and use of **Hydrofluorocarbons (HFCs)** by roughly 80-85% from their respective baselines, till 2045. Kigali agreement is an amendment to Montreal Protocol.

➢ **Bramble Cay melomys: first recorded mammalian(rodent) extinction due to anthropogenic climate change**

- Now the eradication of the Bramble Cay melomys has been officially recognised by Australia, its only known home.

- **The rodent lived solely on a tiny sand island in the Torres Strait, near the coast of Papua New Guinea (PNG).** The species has not been seen since 2009.

- A state government report said it was almost certainly caused by "ocean inundation of the low-lying cay, very likely on multiple occasions, during the last decade, causing dramatic habitat loss and perhaps also direct mortality of individuals".

➢ **World's biggest bee found in the Indonesian islands known as the North Moluccas.**

- The **Wallace's giant bee** (*Megachile pluto*) **belongs to Megachilidae**, a family of mostly solitary bees**.**

- The species was originally **discovered in 1859 by the British explorer** and naturalist Alfred Russel Wallace**.**

- **The Wallace's giant bee** was believed extinct until it was **rediscovered in 1981**. After 1981, the Wallace's giant bee was not observed in the wild for almost four decades.

➢ **Cabinet approves joining of IEA Bioenergy TCP by Ministry of Petroleum and Natural Gas as a Member**

- **International Energy Agency's Technology Collaboration Programme on Bioenergy (IEA Bioenergy TCP)** is an international platform for co-operation among countries with the aim of improving cooperation and information exchange between countries that have national programmes in bioenergy research, development and deployment.

- The **primary goal** of joining **IEA Bioenergy TCP** by Ministry of Petroleum & Natural Gas (MoP&NG) is **to facilitate the market introduction of advanced biofuels** with an aim to bring down emissions and reduce crude imports.

- The **benefits of participation in IEA Bioenergy TCP** are shared costs and pooled technical resources. The duplication of efforts is avoided and national Research and Development capabilities are strengthened. There is an information exchange about best practices, network of researchers and linking research with practical implementation.

- The IEA acts as a policy adviser to its member states, but also works with **non-member countries, especially China, India, and Russia**. **The Agency's mandate has broadened to focus on the "3Es" of effectual energy policy: energy security, economic development, and environmental protection**.

The **International Energy Agency** (**IEA**) is a Paris-based autonomous intergovernmental organization established in the framework of the **Organisation for Economic Co-operation and Development (OECD)** in 1974 in the wake of the 1973 oil crisis. The IEA was initially dedicated to responding to physical disruptions in the supply of oil, as well as serving as an information source on statistics about the international oil market and other energy sectors

➢ **Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016**

In order **to strengthen the implementation of environmentally sound management of hazardous waste** in the country, the Ministry of Environment, Forest and Climate Change has amended the **Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016**.

- The amendment has been done keeping **into consideration the "Ease of Doing Business" and boosting "Make in India" initiative** by simplifying the procedures under the Rules, while at the

same time upholding the principles of sustainable development and ensuring minimal impact on the environment.

Salient Features

✓ **Solid plastic waste has been prohibited from import into the country including in Special Economic Zones (SEZ) and by Export Oriented Units (EOU)**.

✓ Exporters of silk waste have now been given exemption from requiring permission from the Ministry of Environment, Forest and Climate Change.

✓ **Electrical and electronic assemblies and components manufactured in and exported from India, if found defective can now be imported back into the country, within a year of export**, without obtaining permission from the Ministry of Environment, Forest and Climate Change.

✓ Industries which do not require consent under **Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981,** are now exempted from requiring authorization also under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016, provided that hazardous and other wastes generated by such industries are handed over to the authorized actual users, waste collectors or disposal facilities.

> The **Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal**, usually known as the **Basel Convention**, is an international treaty that was designed to reduce the movements of hazardous waste between nations, and **specifically to prevent transfer of hazardous waste from developed to less developed countries.** It does not, however, address movement of radioactive waste.

➢ **Nitrogen Pollution**

The **annual Frontiers Report 2019 published by the United Nations (UN)**, has included a chapter on nitrogen pollution in its latest edition. The report was released by the **United Nations Environmental Assembly (UNEA)** in Nairobi.

Highlights of the Frontiers Report 2019:

• **Pollution caused by the reactive forms of nitrogen is now being recognised as a grave environmental concern on a global level**.

• It highlights that **growing demand on the livestock, agriculture, transport, industry and energy sector has led to a sharp growth of the levels of reactive nitrogen — ammonia, nitrate, nitric oxide (NO), nitrous oxide (N2O)** — in our ecosystems.

• The report claims that the total annual cost of nitrogen pollution to eco system and healthcare services in the world is around $340 billion.

➢ **Swachh Survekshan awards 2019**

The **Swachh Survekshan awards 2019** were recently conferred by President Ram Nath Kovind.

• **Swachh Survekshan 2019 covered all urban local bodies in the country**, making it the largest such cleanliness survey in the world.

• **Indore was adjudged India's cleanest city for the third straight year**. The second and third positions in the category were grabbed by **Ambikapur in Chhattisgarh and Mysuru in Karnataka.**

• Bhopal is country's **Swachh capital**.

• **New Delhi Municipal Council** area was given the **'Cleanest Small City' award**.

• **Uttarakhand's Gauchar** was adjudged the **'Best Ganga Town'**.

➢ **Dhole (Asiatic wild dog)**

A new study has found that **expansion of protected areas in the Western Ghats has not helped the lot of Dhole**, commonly known as the **Asiatic wild dog**, even while enabling the recovery of populations of tigers and other big carnivores.

- Dhole is an apex social carnivore in the tropical forests of South and South East Asia.
- **Endangered –IUCN**.
- **CITES – Appendix II**.
- **Schedule II of wildlife act.**
- The Dhole is a **highly social animal**, living in large clans without rigid dominance hierarchies and containing multiple breeding females.

➢ **Indian Forest Act**

In an attempt to address contemporary challenges to India's forests, the government is **amending the Indian Forest Act, 1927.**

- The proposed amendment accords **significant powers to India's forest officers —** including the power issue search warrants, enter and investigate lands within their jurisdictions, and to provide indemnity to forest officers using arms to prevent forest-related offences.
- Forest-officer not below the rank of a Ranger shall have power to hold an inquiry into forest offences and shall have the powers to search or issue a search warrant under the Code of Criminal Procedure, 1973.

➢ **India's First Forest-certification scheme gets global recognition**

The council of Programme for Endorsement of Forest Certification (PEFC), a Geneva-based non-profit, has decided to endorse the Certification Standard for Sustainable Forest Management (SFM) developed by Network for Certification and Conservation of Forests (NCCF), an Indian non-profit.

- PEFC provides **independent third-party certification for sustainable forest management**.
- **The NCCF was set up in 2015 by representatives of forest-based industries, non-profits, forest auditors and government forest departments** with an aim to set standards for certifying India's forests, their products and their sustainable management.
- **The NCCF's forest certification scheme is aimed to improve India's forest management regime** that is often criticised for various issues ailing the sector such as forest rights, forest degradation, biodiversity losses, encroachments, lack of manpower etc.

➢ **Hump backed Mahseer**

The **hump-backed Mahseer**, found in the **waters of the Cauvery**, has been added to the IUCN Red List with Critically Endangered Status.

- The hump-backed mahseer is a large freshwater fish also called the tiger of the water and found only in the Cauvery river basin including Kerala's Pambar, Kabini and Bhavani rivers.
- **Five other species have also made it to threatened categories:** two wild orchids, the Arabian scad (a marine fish) and two wild coffee species found only in a few localities in the Western Ghats.

➢ **Parrotfish in Andaman**

• **Fishing and coral reef degradation threaten parrotfish in Andaman**. New study says presence of a protected area, live coral and algal cover, significantly influences distribution and abundance of the specie.

• Bumphead parrotfish (Bolbometopon muricatum), is an important component of coral reef ecosystem, but is highly endangered globally. **It is categorized as 'vulnerable' in the Red List of the International Union for Conservation of Nature (IUCN)**.

• **This fish is a highly prized resource**, but is threatened due to limited knowledge about its distribution and abundance in Indian waters.

➢ **UN Environment Assembly**

The **Fourth Environment Assembly was held in Nairobi**, focusing on the **theme "Innovative solutions for environmental challenges and sustainable consumption and production"**.

• The United Nations Environment Assembly is **the world's highest-level decision-making body on the environment**. It addresses the critical environmental challenges facing the world today.

• The Environment Assembly **meets biennially** to set priorities for global environmental policies and develop international environmental law.

• The Assembly is **the governing body of the UN Environment Programme (UN Environment) and the successor of its Governing Council**, which was composed of 58 member States. The UN Environment Assembly, with a universal membership, is now composed of 193 Member States.

• **The first and second sessions of the UN Environment Assembly** tackled and adopted resolutions on major issues of illegal trade in wildlife, air quality, environmental rule of law, financing the Green Economy, the Sustainable Development Goals, and "delivering on the environmental dimension of the 2030 Agenda for Sustainable Development".

• **The Third Environment Assembly** took place in Nairobi in December 2017 under the overarching **theme "Towards a pollution-free planet"**.

➢ **Single-use plastics and Sustainable Nitrogen Management**

India has piloted **resolutions on two key global environmental issues, single-use plastics and sustainable nitrogen management, at the fourth session of United Nations Environment Assembly (UNEA)**. The UN Environment adopted both the resolutions with consensus.

• **So far, 22 States and Union Territories have joined the fight to beat the plastic pollution, announcing a ban on single-use plastics** such as carry bags, cups, plates, cutlery, straws and thermocol products. Puducherry is implementing a ban from March 1.

• **India has also won global acclaim for its "Beat Plastic Pollution" resolve declared on World Environment Day last year**, under which it pledged to eliminate single-use plastic by 2022.

➢ **Global Environment Outlook Repot**

Global Environment Outlook report has been released. The report is **the sixth and is the UN's most comprehensive report on the state of the global environment** since the fifth edition in 2012.

• The GEO is often referred to as **UN Environment's flagship environmental assessment**.

• The **first publication was in 1997** and was originally requested by Member States.

- **It is a flagship report because it fulfills the core functions of the organization**, which date back to the UN General Assembly resolution that established the UNEP in 1972

➢ **Otter census and Pilibhit Tiger Reserve (PTR)**

In a first, Uttar Pradesh begins otter census. Beginning in **the Pilibhit Tiger Reserve**, the exercise will end by the end of March, 2019.

- **PTR is in foothills of Himalayas**, south of Nepal. Covering an area of approximately 800 square kilometres, the reserve sprawls across parts of Pilibhit, Lakhimpur Kheri and Bahraich districts.

- With **the Sharda and Ghaghara rivers encircling a considerable part of the reserve**, it is rich in water bodies.

- The forests of PTR are to home to tigers, leopards, elephants, different species of deer and monkeys and reptiles like snakes, mugger crocodiles and gharials.

Otters :

✓ Otters are an important part of forest ecosystem. A thriving population of otters means a healthy ecosystem.

✓ As mammal, an otter spends much of its time in or close to water bodies. Otters live on fish.

✓ They are classified as **vulnerable.**

➢ **Grey hypocolius**

The **Grey Hypocolius (Hypocolius ampelinus), a small migratory bird that usually makes its home in West Asia and North Africa and is a regular visitor to Kutch**, has been sighted in Western Rajasthan for the first time on March 4, 2019.

- The grey hypocolius (Hypocolius ampelinus) is a small passerine bird species. **It is the sole member of the genus Hypocolius and it is placed in a family of its own, the Hypocoliidae**.

- This slender and long tailed bird is found in the dry semi-desert region of **northern Africa, Arabia, Afghanistan, Pakistan, and western India**. They fly in flocks and forage mainly on fruits, migrating south in winter.

- Because the species has a large range, and because it does not meet the population size and decline criteria of IUCN Red List, the conservation status is evaluated as being of **"least concern"**.

➢ **Climate Vulnerability Index**

Scientists have developed a common framework for assessment of climate change vulnerability in all the states in the Himalayan region. They have developed **an index based on socio-economic factors, demographic and health status, sensitivity of agricultural production, forest-dependent livelihoods and access to information, services and infrastructure**.

- Assessment shows that the vulnerability index is the **highest for Assam (0.72) & Mizoram (0.71)**.

- **Sikkim is the least vulnerable state with the index being 0.42**. Districts within a state face different degrees of vulnerability based on difference in geographic, climatic, socio-economic and demographic conditions.

- **Assam is highly vulnerable to climate change** because of factors like low per capita income, deforestation, large number of marginal farmers, least area under irrigation, lack of alternative sources of income and high rates of poverty.

➢ **Bharat Stage Norms**

NCR districts switch to Euro-VI grade fuels (BS-VI fuels). The supply of ultra-clean Euro-VI grade fuel (also known as Bharat Stage VI grade fuel) began in cities adjoining the National Capital Region (NCR) on April 1, 2019.

- Delhi in April 2018 became the first city in the country to roll-out ultra-clean Bharat Stage VI (BS-VI) grade fuel, both petrol and diesel.

- The BS — or Bharat Stage — emission standards are norms instituted by the govt to regulate the output of air pollutants from internal combustion engine equipment, including motor vehicles. India has been following the European (Euro) emission norms, though with a time-lag of five years.

➢ **Bejjur vultures**

- They are also known as **longbilled vultures (Gyps indicus)**. It is **the smallest of the vultures**.

- Feed exclusively on carrion, and mainly remains of cattle.

- Breed in colonies.

- Listed under the **'critically endangered' category** by the International Union for Conservation of Nature (IUCN).

- **Vulnerable to poisoning by Diclofenac**.

➢ *Kurinji or Neelakurinji*

- **Kurinji or Neelakurinji (Strobilanthes kunthianus) is a shrub that is found in the shola forests of the Western Ghats in South India**.

- Nilgiri Hills, which literally means the blue mountains, got their name from the purplish blue flowers of Neelakurinji that blossoms only once in 12 years.

- Some Kurinji flowers bloom once every seven years, and then die. Their seeds subsequently sprout and continue the cycle of life and death.

- **The Paliyan tribal people living in Tamil Nadu used it as a reference to calculate their age**.

➢ *Yangtze giant softshell turtles*

The only known female member of one of the world's rarest turtle species has died at a zoo in southern China. The animal was one of four *Yangtze giant softshell turtles* known to be remaining in the world. The Suzhou zoo, where the female turtle lived, also houses a male Yangtze giant softshell turtle. The other two live in Vietnam

- It is **also known as the Red River giant softshell turtle, Shanghai softshell turtle, Swinhoe's softshell turtleor speckled softshell turtle**.

- It is listed **as critically endangered in the IUCN Red List**. It may be the **largest living freshwater turtle in the world**.

➢ **Eurasian Lynx**

- **The Eurasian Lynx, found currently only in Ladakh and some parts of Pakistan-Occupied Kashmir**, may have found its way into the Kashmir Valley, according to a report.

- **If confirmed, the lynx would be the third smaller cat species reported from the Kashmir Valley. The other two include the Jungle Cat and the Leopard Cat**.

- The Eurasian Lynx or Ee in Ladakhi is one of the medium-sized wild cats which roam the high and cold snow-covered mountains of Ladakh. The cat is agile and strong and is high adapted to the thin air atmosphere of Ladakh.

- **It inhabits temperate and boreal forests up to an altitude of 5,500 m (18,000 ft)**. Because of its wide distribution, **it has been listed as Least Concern on the IUCN Red List since 2008**.

➤ **Discolouration of River Periyar in Kerala**

The Periyar River in Kerala has turned black near the Pathalam Regulator cum Bridge.

- The discolouration was due to **the poor quality of water as a result of eutrophication**. **When excessive nutrients reach the waterbody**, it will lead to algal bloom. A few days later, algae will die and decay, resulting in a foul smell and discolouration of water.

- **Water in some reaches of the river system has been stagnant**. Reduced water flow in the system has added to the deteriorating water quality.

- **Huge quantities of organic load in the form of sewage from nearby townships** are regularly reaching the river system. **Discharge of untreated effluents** into the river from industrial units is also causing discolouration of water.

- The discolouration of Periyar and fish kill has been a serious issue for last couple of years. *Decrease in dissolved oxygen* level has caused several fish-kills in the past few years.

➤ **I*sland protection zone (IPZ) 2019 for Andaman and Nicobar***

The union environment ministry has notified *island protection zone (IPZ) 2019 for Andaman and Nicobar*.

- **It allows eco-tourism projects 20 metres from the high tide line (HTL) in smaller islands like Baratang, Havelock and Car Nicobar, and at 50 metres in larger ones**.

- **It allows for eco-tourism activities like** mangrove walks, tree huts and nature trails in island coastal regulation zone IA (classified as the most eco-sensitive region of the islands which includes turtle nesting grounds, marshes, coral reefs etc).

- **The notification also allows for construction of roads**, roads on stilts by reclaiming land in exceptional cases for defence installations, public utilities or strategic purposes in eco-sensitive zones.

- It states that in case construction of such roads pass through mangroves, a minimum three times the mangrove area destroyed during the construction process shall be taken up for compensatory plantation of mangroves elsewhere.

- **It also allows a number of new activities in the inter-tidal zone** between low tide line and HTL. This includes land reclamation and bunding for foreshore facilities like ports, harbours, jetties, wharves, quays, sea links etc, transfer of hazardous substances from ships to ports, manual mining of atomic minerals, and mining of sand for construction purposes with permission from local authorities in non-eco-sensitive sites.

SCIENCE AND TECHNOLOGY

SPACE

➢ **British Satellite Tests its Space Junk Harpoon**

• The **RemoveDebris satellite** tested out its harpoon for the first time. The purpose of this satellite is to test whether satellites equipped with targeting software, a debris net and a harpoon are effective at combating space debris.

• the satellite successfully demonstrated its harpoon system and **verified its ability to secure space debris and keep it from flying away**.

• **The RemoveDEBRIS mission** was **started in 2013** by a consortium of 10 partners across Europe, including **aerospace giant Airbus .and the University of Surrey's Surrey Space Center**. Airbus carried out the successful mission as a step toward cleaning up our growing junkyard of space debris orbiting the Earth.

For Details on SpaceDebris Mission , Refer to the Quick Revision For Prelims(Jun-Nov, 2018) edition.

➢ **India Successfully Tests Supersonic Solid Fuel Ducted Ramjet Propelled Missile**

• The second **indigenously developed 'Solid Fuel Ducted Ramjet (SFDR)' propulsion-based missile system** was successfully flight tested in Odisha by the Defence Research and Development Organisation (DRDO) .

• **The ramjet propulsion system used in the SFDR acts** as **an oxidizer** and the solid propellant reacts as air flows through a solid propellant duct.

• Unlike conventional rockets that carry **propellant and oxidizer**, **Ramjet uses the air as an oxidizer just like a jet engine.** Therefore the weight of the fuel required is eliminated.

• **SFDR propulsion is designed in such a way that it allows for an up and down throttling**. This further lets the missile to amplify its speed until it reaches terminal phase of the flight. The speed increases until the point when sharp turns are required to search for highly manoeuvring targets.

• The success of SFDR propulsion technology will pave the way for the development of long-range air-to-air missiles in the country.

For high supersonic or hypersonic flight, the ideal propulsion system is a ramjet. A ramjet uses the forward speed of the aircraft to compress the incoming air and, therefore, has fewer moving parts than a turbine engine. Thus, while rockets can operate in the near vacuum of space, ramjets must fly through the atmosphere. They must do so at very high speeds, too -- **around Mach 2.5-3.0**, or three times the speed of sound -- because ramjets work by harnessing **ram pressure,** the natural air compression brought on by an aircraft's high speed. Ramjets are more efficient over long distances than rockets but suffer a significant disadvantage: They are useless at low velocities.

➢ **A New Moon for Neptune: Hippocamp**

• **Neptune has a moon** so **small that it was missed by NASA's Voyager 2** cameras when the probe flew by the **planet in 1989**. **Called Hippocamp**, it measures no more than 12 miles across.

• NASA/ESA Hubble Space Telescope, with help from older data from Voyager 2, has revealed more about the origins of this tiny moon. First discovered in 2013, it is believed to be a piece of one of its larger neighbors **Proteus**.

- The astronomers are speculating that billions of years ago **a comet collision took a piece out of Proteus** and saw the **creation of Hippocamp.**

- **Triton is the largest moon of Neptune.**

> **Mars Rover Opportunity Is Dead After Record-Breaking 15 Years on Red Planet**

- The **Opportunity rover mission** of **NASA** has been recently declared as complete.

- The **robot has been missing since the U.S. space agency lost contact** during a dust storm in June 2018.

- It operated **for 14 years** on **Mars** and **confirmed that water once flowed on the red planet. Spirit was also launched in the same year for Mars**

> **NASA's SPHEREx mission will investigate the origins of the universe**

- **NASA** has announced a new space telescope mission **dedicated to understanding the origins of life and the universe.**

- **It's called the Spectro-Photometer for the History of the Universe, Epoch of Reionization and Ices Explorer or SPHEREx, for short.**

- Once SPHEREx is already in orbit, it will observe and collect data on over 300 million galaxies, some as far as 10 billion light-years away from Earth, and 100 million stars in our own Milky Way every six months**.**

- **The space telescope's main goals, though, are to search for water and organic molecules within the Milky Way**. It will also look for those ingredients of life in regions where stars are born, as well as in disks around stars forming new planets.

> **ARTEMIS Mission**

Scientists used NASA's ARTEMIS mission and suggest that *the solar wind and the Moon's crustal magnetic fields work together to give the Moon a distinctive pattern of darker and lighter swirls*.

- ARTEMIS stands for **"Acceleration, Reconnection, Turbulence and Electrodynamics of the Moon's Interaction with the Sun"**.

- ARTEMIS is made up of two probes P1 and P2. They were **originally members of the successful mission THEMIS in Earth orbit studying Earth's aurora**, but were redirected to the moon in an effort to save the two probes from losing power in Earth's shade.

- Through this new mission scientists look to **learn more about the Earth-moon Lagrange points, the solar wind, the Moon's plasma wake and how the Earth's magnetotail and the moon's own weak magnetism interact with the solar wind**.

> **Atmospheric Wave Experiment (AWE)**

The National Aeronautics and Space Administration has selected a new mission- *Atmospheric Waves Experiment (AWE)- that will help scientists understand and ultimately, forecast the vast space weather system around the Earth.*

- It will be launched in August 2022 and will be **attached to exterior of Earth-orbiting International Space Station (ISS)**.

- **Objective of AWE** is to study and focus on airglow, a colourful bands of light in Earth's atmosphere to determine what combination of forces drive space weather in upper atmosphere.

- **It will be the first such experiment to obtain global observations of important driver of space weather** in dynamic region of Earth's upper atmosphere that can cause interference with radio and GPS communications.

- **AWE is a Mission of Opportunity under NASA's Heliophysics Explorers Program**, which conducts focused scientific research and develops instrumentation to fill the scientific gaps between the agency's larger missions.

➢ *ISRO's Young Scientist Programme*

ISRO has launched a special programme for school children called Yuva Vigyani Karyakram or Young Scientist Programme.

Highlights of the programme:

- The programme aims at **imparting basic knowledge on space technology, space science and space applications to the younger ones** with the intent of arousing their interest in the emerging areas of space activities.

- Under the programme, **three students each will be selected to participate in it every year from each state and union territory**, covering CBSE, ICSE and state syllabus.

- **The eligibility for being chosen for the programme includes those students who have finished 8th standard and are currently studying in the 9th standard**.

- The selection will be based on the academic performance and extracurricular activities of the students, as per the selection criteria already circulated to the chief secretaries of the states and administrators of Union Territories.

- The students belonging to **rural areas have been given special weightage** under the selection criteria set by ISRO.

➢ *Lunar Reconnaissance Orbiter (LRO)*

- NASA's *Lunar Reconnaissance Orbiter (LRO)* has observed water molecules moving around the dayside of Moon, an advance that could help us learn about the accessibility of water that can be used by humans in future lunar missions.

- *Lyman Alpha Mapping Project (LAMP)* — the instrument aboard LRO — measured sparse layer of molecules temporarily stuck to the Moon's surface, which helped characterise lunar hydration changes over the course of a day.

- *LRO is a NASA mission to the moon within the Lunar Precursor and Robotic Program (LPRP)* in preparation for future manned missions to the moon and beyond (Mars).

- *LRO is the first mission of NASA's `New Vision for Space Exploration'*, which President Bush announced on January 14, 2004, in sending more robot and human explorers beyond Earth orbit.

➢ **ISRO's AstroSat**

The Indian multi-wavelength space observatory **AstroSat, launched in September 2015**, continues to yield exciting results. Using this observatory, astronomers from Thiruvananthapuram and Mumbai have identified a new population of ultraviolet stars in the *globular cluster NGC 2808*.

- *Globular clusters are collections of thousands to millions of stars, moving as one unit.* These stars are tightly held together by gravity of the cluster itself, and are believed to have formed together at roughly the same time. **Some globular clusters could be among the oldest objects in our Milky Way, which hosts over 150 of them**.

➢ **GRAPES- 3**

Researchers at the **GRAPES-3 muon telescope facility in Ooty have measured the electrical potential, size and height of a thundercloud** that passed overhead on December 1, 2014.

- Learning about the properties of thunderclouds can be useful in navigation of aircraft and preventing short circuits.

- The GRAPES-3 experiment (or Gamma Ray Astronomy PeV EnergieS phase-3) located at Ooty in India started as *a collaboration of the Indian Tata Institute of Fundamental Research and the Japanese Osaka City University, and now also includes the Japanese Nagoya Women's University*.

- *GRAPES-3 is designed to study cosmic rays* with an array of air shower detectors and a large area muon detector.

- *It aims to probe acceleration of cosmic rays in the following four astrophysical settings. These include acceleration of particles to,* (i) ~100 MeV in atmospheric electric fields through muons, (ii) ~10 GeV in the Solar System through muons, (iii) ~1 PeV in our galaxy, (iv) ~100 EeV in the nearby universe through measurement of diffuse gamma ray flux.

➢ **PSLV-C45/ Emisat Mission**

India's Polar Satellite Launch Vehicle (PSLV), in its 47th mission (PSLV-C45), launched **EMISAT**, the primary satellite and 28 international customer satellites from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota.

- *This mission will be ISRO's first attempt at placing payloads in three different orbits*.

- **EMISAT is meant for electromagnetic spectrum measurements**. It will be released into an orbit at 749 km.

- **EMISAT is primarily based on the famous Israeli spy satellite called SARAL or (Satellite with ARgos and ALtika)**, and inherits its SSB-2 bus protocol for conducting sharp electronic surveillance across the length and breadth of India.

- The satellite would **serve as the country's roving device for detecting and gathering electronic intelligence from enemy radar**s across the borders as it circles the globe roughly pole to pole every 90 minutes or so.

➢ **PULSARS**

NASA has discovered a pulsar speeding through space.

- **This pulsar is dubbed PSR J0002+6216 (J0002 for short)** and sports a radio-emitting tail pointing directly towards the expanding debris of a recent supernova explosion.

- The NASA found the pulsar hurtling through space at nearly four million kilometres an hour. The speed of the pulsar in the space is so fast that it could travel the distance between the Earth and the Moon in just six minutes.

- Pulsar J0002 was discovered in 2017 by *a citizen-science project called Einstein@Home*, which uses time on the computers of volunteers to process Fermi gamma-ray data.

- **Pulsar is a celestial object that emits regular pulses of radio waves** and other **electromagnetic radiation at rates of up to one thousand pulses per second**.

- Pulsars are superdense, rapidly spinning neutron stars left behind when a massive star explodes.

➢ NASA's OSIRIS-Rex

NASA's OSIRIS-REx spacecraft has detected particle plumes ejecting off of the surface of asteroid Bennu. That makes *Bennu an active asteroid that is regularly ejecting material into space*, which is rare. This is the first time scientists have had close-up observations of particle plumes erupting from an asteroid's surface.

- The particles range from centimeters to 10s of centimeters, and some of them are slow-moving while others are quickly making their way through interstellar space. Some fall back onto the surface, while others go into orbit around it, like small satellites. The researchers don't currently understand why this is happening, but it poses no risk to the spacecraft.

- **OSIRIS-REx's instruments have confirmed that hydrated minerals, including magnetite**, are abundant and widespread on the asteroid. The asteroid is full of valuable materials that may even contain **clues about how life began**. Bennu is essentially a leftover from the formation of our solar system billions of years ago, although some of the minerals inside it could be even older.

- *OSIRIS-Rex is the first-ever US mission designed to visit an asteroid and return a sample of its dust back to Earth*.

➢ Matter-Antimatter

Physicists from the Large Hadron Collider beauty (LHCb) Collaboration at CERN have observed, for the first time, *the matter-antimatter asymmetry known as charge-parity (CP) violation* in the **decays of a D0 meson**, a subatomic particle made up of a charm quark and an up antiquark.

Charge Parity (CP)

The term CP refers to the transformation that swaps a particle with the mirror image of its antiparticle.

- ✓ **The weak interactions of the Standard Model of particle physics** are known to **induce a difference in the behavior of some particles and of their CP counterparts**, an asymmetry known as CP violation.

- ✓ **This asymmetry is one of the key ingredients required to explain why today's Universe** is only composed of matter particles, with essentially no residual presence of antimatter.

➢ Stephen Hawking's theory for mysterious dark matter

A group of scientists have ruled out Stephen Hawking's theory for mysterious dark matter.

- Stephen Hawking proposed *a theory that primordial black holes are a source of dark matter*. He computed that the *mass of the primordial black holes could range from as low as one-hundredth of a milligram to as high as more than the mass of a thousand Suns*.

Findings by scientists:

- The research team used the ***Hyper Suprime-Cam on the Japanese Subaru Telescope located in Hawaii*** to look for any tell-tale evidence of primordial black holes between Earth and Andromeda galaxy using gravitational lensing technique.

- **For one whole night, the research team took 190 consecutive images of Andromeda galaxy. If the Universe is filled with invisible teeny weeny primordial black holes, with masses lighter than the moon, as postulated by Stephen Hawking, then the team should have seen at least 1,000 gravitational lensing events**. However, they were able to see at most one such candidate event, if not none. This implies Prof Stephen Hawking's theory that such black holes make up all of dark matter is wrong

> ➢ **Hayabusa-2**

Japan's spacecraft Hayabusa-2 recently dropped an explosive on an asteroid to make a crater. It's aim was to make a crater on asteroid. Also, this spacecraft will collect its underground samples to find possible clues to the origin of the solar system.

- ***Hayabusa2 is the second Japanese spacecraft to land on an asteroid***, after Hayabusa achieved a similar feat back in 2005.

- In mid-September 2005, Hayabusa landed on the asteroid Itokawa, and managed to collect samples in the form of grains of asteroidal material. It returned to Earth with the samples in June 2010, thereby becoming the **first spacecraft to return asteroid samples to Earth for analysis.**

- It is an asteroid sample-return mission operated by the Japanese space agency, JAXA.

- It was launched on 3 December 2014 and rendezvoused with near-Earth asteroid 162173 Ryugu on 27 June 2018.

- It is in the process of surveying the asteroid for a year and a half, departing in December 2019, and returning to Earth in December 2020..

- Since it arrived at Ryugu in June 2018, **Hayabusa 2 has dropped two hopping landers, collectively known as MINERVA-II**, onto the surface of the space rock to take pictures and measure the asteroid's temperature.

> ➢ ***EMISAT Mission***

The Indian Space Research Organisation (ISRO) has launched the ***country's first electronic surveillance satellite, EMISAT***.

- It was **launched on-board PSLV-C45. As many as 28 small satellites of international customers were also put in space as secondary riders**.

- EMISAT is an advanced electronic intelligence (ELINT) satellite ***jointly developed by ISRO-DRDO***. It is meant for electromagnetic spectrum measurements.

- It is ***modelled after a famous Israeli spy satellite called SARAL (Satellite with ARgos and ALtika)***. Both these satellites have the SSB-2 bus protocol — the core component for their sharp electronic surveillance capabilities across the length and width of a large country like India.

- EMISAT also has ***a special altimeter (a radar altitude measuring device) called 'AltiKa'*** that works in the Ka-band microwave region of the spectrum. The electronic surveillance payload of EMISAT was developed under ***a DRDO's project called KAUTILYA***.

- ***The main capability of EMISAT is in signal intelligence*** — intercepting signals broadcasted by communication systems, radars, and other electronic systems. The Ka-band frequency that EMISAT is sensitive to, allows the 436-kg EMISAT — India's newest spy in the sky — to scan through ice, rain, coastal zones, land masses, forests and wave heights with ease.

➢ ***Double Asteroid Redirection Test (DART)***

SPACEX TO LAUNCH NASA'S ASTEROID-SMASHING MISSION The mission will blast off in June 2021 and will smash into the asteroid's moon around October 2022.

- The **Double Asteroid Redirection Test, or DART**, is a spacecraft designed to determine whether an asteroid can be redirected with a high-speed collision.

- **SpaceX will launch the spacecraft toward an asteroid named Didymos** about 4 million miles from Earth. It then will ram into the asteroid's small moon at about 13,000 miles per hour.

- ***DART would be NASA's first mission to demonstrate what's known as the kinetic impactor technique –*** striking the asteroid to shift its orbit – to defend against a potential future asteroid impact.

- The target for DART is an asteroid that will have a distant approach to Earth in October 2022, and then again in 2024. The asteroid is called ***Didymos – Greek for "twin"*** -because it is an asteroid binary system that consists of two bodies: Didymos A, about 780 metres in size, and a smaller asteroid orbiting it called Didymos B, about 160 metres in size.

➢ **Black Holes**

The **first photograph of a black hole was revealed by scientists recently**.

- A black hole is an object in space that is **so dense and has such strong gravity that no matter or light can escape its pull**. Because no light can escape, it is black and invisible.

- There's **a boundary at the edge of a black hole called the event horizon, which is the point of no return** — any light or matter that crosses that boundary is sucked into the black hole. It would need to travel faster than the speed of light to escape, which is impossible.

- **Anything that crosses the event horizon is destined to fall to the very centre of the black hole and be squished into a single point with infinite density, called the singularity.**

➢ **Mission Shakti**

Indian scientists have successfully conducted ***Mission Shakti*** shooting down a live satellite target in the low earth orbit (LEO).

- **Mission Shakti** is ***a joint programme of the Defence Research and Development Organisation (DRDO) and the Indian Space Research Organisation (ISRO)***.

- As part of the mission, a**n anti-satellite (A-SAT) weapon was launched and targeted an Indian satellite which had been decommissioned**. Mission Shakti was carried out from DRDO's testing range in Odisha's Balasore.

- ***India is only the 4th country to acquire such a specialised and modern capability***, and the entire effort is ***indigenous***. Till now, only the **US, Russia and China** had the capability to hit a live target in space.

- The principal international Treaty on space is the *1967 Outer Space Treaty India is a signatory to this treaty, and ratified it in 1982*. The Outer Space Treaty prohibits only weapons of mass destruction in outer space, not ordinary weapons.

BIOTECHNOLOGY

➢ **Atal Jai Anusandhan Biotech Mission - Undertaking Nationally Relevant Technology Innovation (UNaTI)** expected to **transform Health, Agriculture and Energy sectors during the next 5 years.**

This mission includes –

- **GARBH-ini - A Mission to promote Maternal and Child Health and develop prediction tools for pre-term berth,**

- **IndCEPI - A Mission to develop affordable vaccines for endemic diseases, Development of Biofortified and Protein Rich wheat - contributing to POSHAN Abhiyan,**

- **Mission on Anti-Microbial Resistance for Affordable Diagnostics and Therapeutics and**

- **Clean Energy Mission - Innovative Technology interventions for Swachh Bharat.**

➢ *CRISPR-Cas9 Technology*

For the first time, *four lizards have been genetically modified using the CRISPR-Cas9 gene editing tool*.

- Researchers from the University of Georgia (UGA) were able to target the pigmentation genes of **Anolis sagrei lizards** to create four albino offspring.

- The team specifically targeted the **tyrosinase gene** and successfully injected the gene editing solution into 146 oocytes.

- **Albinism** is a trait inherited from both parents and in this study, the researchers found that the CRISPR protein targeted the tyrosinase protein from both the mother and father of the offspring which means that the CRISPR solution was active long after fertilization.

CRISPR-Cas9

✓ *The clustered, regularly interspaced, short palindromic repeats, or CRISPR/CRISPR-associated protein 9 (Cas9) (CRISPR-Cas9) system* has revolutionised genetic manipulations and made gene editing simpler, faster and easily accessible to most laboratories.

✓ *CRISPR technology is basically a gene-editing technology that can be used for the purpose of altering genetic expression* or changing the genome of an organism. The technology can be used for targeting specific stretches of an entire genetic code or editing the DNA at particular locations.

✓ CRISPR-Cas9 technology behaves like a cut-and-paste mechanism on DNA strands that contain genetic information.

The specific location of the genetic codes that need to be changed, or "edited", is identified on the DNA strand, and then, using the Cas9 protein, which acts like a pair of scissors, that location is cut off from the strand. A DNA strand, when broken, has a natural tendency to repair itself

IT AND ICT

➢ **PARAM Shivay at IIT BHU**

• **The first Supercomputer designed and built under National Supercomputing Mission (NSM) by C-DAC at Indian Institute of Technology (BHU), Varanasi** was dedicated by Hon'ble Prime Minister Shri Narendra Modi to the scientific and research community of the nation in order to strengthen the research and development activities in the country.

• It uses more than one lakh twenty thousand compute cores (CPU + GPU cores) to offer a peak computing power of **833 TeraFlops. A teraflop is a measure of a computer's speed equivalent to a trillion floating point operations per second. It is a measure of the processing speed of computer.**

• Under NSM, the **long-term plan is to build a strong base of 20,000 skilled persons**. **PARAM Shavak** is one such machine that has been deployed to provide training.

• **IIT Kharagpur has signed an MoU with Centre for Development of Advanced Computing (C-DAC) to set up a 1.3 Petaflop high-performance computing facility** and data centre funded under **the National Supercomputing Mission**.

• These supercomputers will also be networked on the National Supercomputing grid over the **National Knowledge Network (NKN)**. The NKN is another programme of the government which connects academic institutions and R&D labs over a high speed network.

• **The Mission includes development of highly professional High Performance Computing (HPC) aware human resource for meeting**

For Details on National Supercomputing Mission , Refer to the Quick Revision For Prelims(Dec-Jan, 2018) edition.

➢ **30th birthday of World Wide Web**

• **Google Doodle marked the 30 years of the innovation of World Wide Web on March 12, 2019 with a GIF doodle, which featured an old, plugged-in computer with a rotating globe.**

• **The inventor of WWW, Sir Tim Berners-Lee, was 33 when he first submitted the 'Information Management: A Proposal' for World Wide Web while working at Europe's CERN lab. He submitted his proposal on March 12, 1989, which led to the invention of World Wide Web.**

• **Berners started out with his invention by typing out the basic HTML language, the HTTP application, and WorldWideWeb.app, which became the first web browser and page editor. And by 1991, the external Web servers were up and running.**

HEALTH, MEDICINES AND DISEASES

➢ **West Nile Virus**

Health Ministry took stock of the public health measures for controlling West Nile Virus.

• **West Nile Virus (WNV) is a member of the flavivirus genus and belongs to the Japanese encephalitis antigenic complex of the family Flaviviridae**.

• West Nile Virus (WNV) can cause neurological disease and death in people. WNV is commonly found in Africa, Europe, the Middle East, North America and West Asia.

• WNV is maintained in nature in a **cycle involving transmission between birds and mosquitoes**. Humans, horses and other mammals can be infected.

- **Human infection is most often the result of bites from infected mosquitoes**.

- *The virus may also be transmitted through contact with other infected animals, their blood, or other tissues.*

- Treatment is supportive for patients with neuro-invasive West Nile virus, often involving hospitalization, intravenous fluids, respiratory support, and prevention of secondary infections. No vaccine is available for humans.

➤ **Discovery of New Enzyme by CCMB**

Scientists at CCMB(Centre for Cellular & Molecular Biology) have discovered a new enzyme which helps in breaking cell walls of bacteria and hence, offers a potential for a new drug delivery route to arrest the anti-bacterial resistance.

- Researchers discovered that by blocking *'scissors enzyme'* from functioning, new ways to target microbes could be found, leading to a new wave of antibiotic drug. Other bacteria, too, have the same enzyme working on cell division as the cell wall is fundamental for bacterial growth and division.

- The new enzyme offers a potential for a new drug delivery route to arrest the anti-bacterial resistance through existing antibiotic drugs. It opens up fresh ways to target microbes, leading to a new wave of antibiotic drugs.

➤ **Drug Resistant Fungus – Candida auris**

The killer germ, a fungus called Candida auris, has showed up in countries as far apart as Australia and Canada, Venezuela and Japan, over the past few years. It has set alarm bells ringing because it is often resistant to multiple anti-fungal drugs.

- Candida auris is *an emerging fungus that presents a serious global health threat*. Patients can remain colonised with C. auris for a long time and C. auris can persist on surfaces in healthcare environments. This can result in spread of C. auris between patients in healthcare facilities.

- auris infection often goes unnoticed and its resistance to drugs makes it even more difficult to treat. Moreover, it is difficult to identify with standard laboratory tests, increasing the risk of mismanagement or misidentification if not diagnosed properly.

➢ **Vision 2030 for India**

• Presenting the Interim Budget, the Finance Minister laid out the government's vision for India in 2030, highlighting "10 most important dimensions
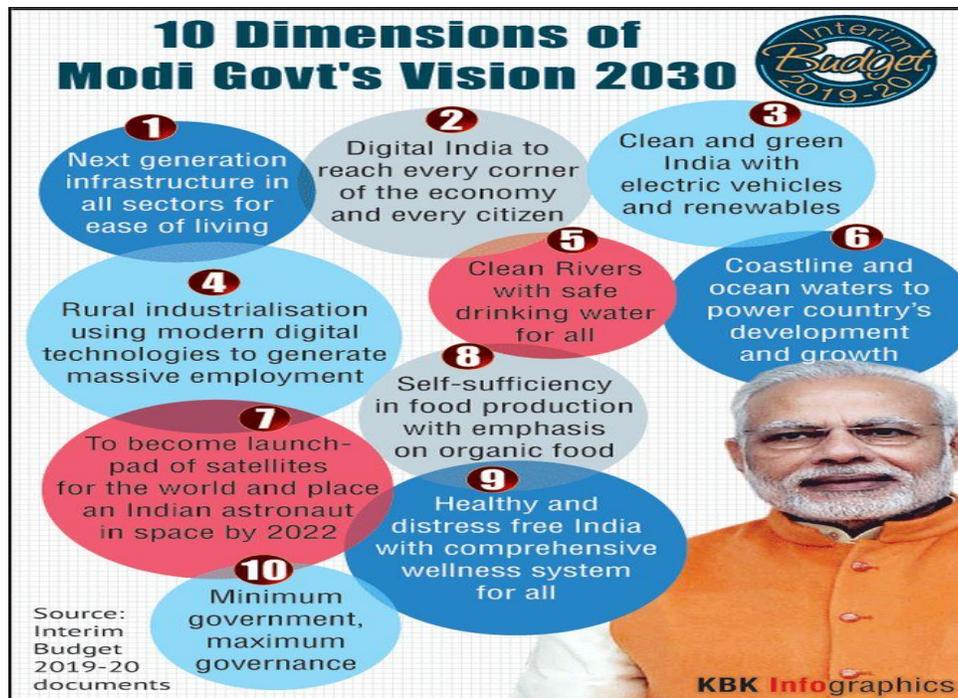
➢ **National Film Development Corporation of India has been selected as a winner under the Miniratna Category (Category II) by Ministry of Micro, Small and Medium Enterprises (MSME) for the promotion of SC/ST entrepreneurs**

• National Film Development Corporation Ltd. (NFDC), incorporated in the year 1975, was formed by the Government of India with the primary objective of planning and promoting an organized, efficient, and integrated development of the Indian film industry.

➢ **India has been ranked 36th out of 50 economies (India ranked 44th in 2017) in the International Intellectual Property (IP) Index 2018**

• **It is released by the US Chamber of Commerce's Global Innovation Policy Center (GIPC)**

• **The United States, Britain and Sweden took the top three positions**.

➢ **Why are quakes happening at Palghar?**

• **Since November 2018, Maharashtra's Palghar district has experienced dozens of small earthquakes**.

• This pattern of several small earthquakes occurring in a brief time-window is called an earthquake swarm

• **Most earthquakes there were very shallow: they originated from within a few kilometres below the surface. Further, the tremors stopped soon after the monsoon. The researchers**

concluded that the swarms were related to the monsoon, and were attributable to a phenomenon called "hydro-seismicity.

- In "hydro-seismicity," which is hypothesised as the reason for swarms in peninsular India, water from heavy rainfall enters small fractures in rocks. This raises the pressure within them. This pressure is released in earthquake swarms

- **Intensity**, measured by **Medvedev-Sponheuer-Karnik (MSK)**, is a qualitative measure of how people experience earthquakes, rather than the energy released, which is measured by the **magnitude scale**.

Women's Global Development and Prosperity(W-GDP) Initiative by USA

- This initiative will **ensure women around the world** are **empowered** and have the resources needed to meaningfully participate in, contribute to, and benefit from economic opportunities.

- **The W-GDP Initiative will support women in the economy around the world to help them thrive in the workforce, launch businesses, and create value for their communities**. Through this Initiative, the Unites States will aim to reach 50 million women across the developing world by 2025, boosting global gross domestic product and advancing peace, security, and stability for all**.**

- **W-GDP is the U.S. Government's first integrated approach to global women's economic empowerment across multiple U.S. Government departments and agencies.**

- The initiative will focus on **three critical pillars for women's economic empowerment: workforce development and skills training; entrepreneurship and access to capital; and the overall enabling environment of policies, laws, and social norms that affect women's economic participation.**

Sela tunnel project in Arunachal Pradesh

- Sela Tunnel Project is estimated to cost Rs. 687 crore. It is being constructed by **the Border Roads Organisation (BRO**) and is expected to be completed in the next three years. It covers a total distance of 12.04 kilometers and consists of two tunnels of 1790 and 475 meters each.

- Once completed, the project would provide **all-weather connectivity to Tawang and forward areas.**
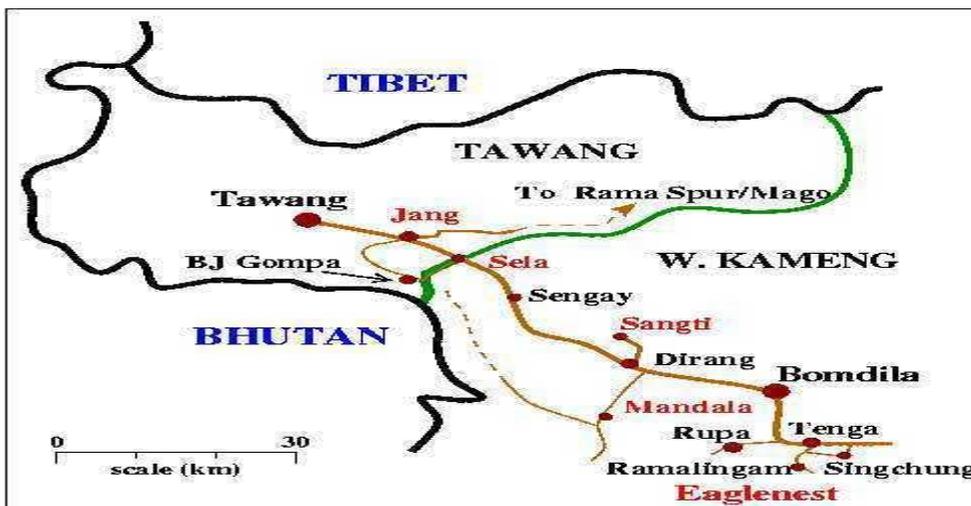
➢ **India Ranks 47th Out of 100 Countries in The Facebook Inclusive Internet Index 2019**

• India has been ranked 47th in the overall "Inclusive Internet Index 2019" score while Sweden topped the chart, followed by Singapore and the US, a Facebook-led study has revealed.

• **According to the Inclusive Internet Index (3i) prepared by the Economist Intelligence Unit (EIU) for Facebook,** there are demonstrable benefits from comprehensive female e-inclusion policies, digital skills programmes and targets for women and girls to study science, technology, engineering and mathematics (STEM).

• The **'Inclusive Internet' score was based on the scores of availability, affordability, relevance and readiness categories**.

➢ *New state of physical matter*

Scientists have found *a new state of physical matter* recently. The new state *is solid and liquid at the same time*. Atoms can exist as both solid and liquid simultaneously.

• The state is *known as the chain melted state*.

• When *applying high pressures and temperatures to potassium, a simple metal; it creates a state in which most of the element's atoms form a solid lattice structure*. However, *some elements can, when subjected to extreme conditions, take on the properties of both solid and liquid states*. Researchers have shown that this unusual but stable state is part solid and part liquid.

➢ **Solar e-waste**

By 2050, India will likely stare at a pile of a new category of electronic waste, namely solar e-waste. *India's PV (photovoltaic) waste volume is estimated to grow to 200,000 tonnes by 2030 and around 1.8 million tonnes by 2050.*

• *Solar modules use potentially hazardous materials, including lead compounds, polymers and cadmium compounds*. If disposed of in an inappropriate way, potential leaching of those hazardous materials can have negative environmental and health impacts.

• Currently, **India's e-waste rules have no laws mandating solar cell manufacturers to recycle or dispose waste from this sector**.

• India is poorly positioned to handle PV waste as it doesn't yet have policy guidelines on the same.

• A lack of a policy framework is coupled with the fact that **even basic recycling facilities for laminated glass and e-waste are unavailable**. Despite the e-waste regulation being in place for over seven years, **only less than 4% of estimated e-waste is recycled in the organised sector** as per the latest estimates from the Central Pollution Control Board.

➢ **The latest report released by United Nations Office of Drugs and Crime (UNODC) says that** *India is one of the major hubs of illicit drug trade ranging from age-old cannabis to newer prescription drugs like tramadol, and designer drugs like methamphetamine*.

Key Finding

• While the global trend of purchasing drugs over the internet, **particularly on darknet trading platforms using cryptocurrencies has already spread across South Asia, it is particularly rampant in India**.

- **India is also a transit country for illicitly produced opiates, in particular heroin**. The route used by traffickers to smuggle opiates through South Asia is an alternative part of the so-called **"southern route"**, which runs through Pakistan or the Islamic Republic of Iran, via the Gulf countries, continues to East Africa and on to destination countries.

- **Also, India, Australia, France and Turkey accounted for 83% of global production of morphine-rich opiate raw materials in 2017**. The stocks were considered sufficient to cover 19 months of expected global demand by manufacturers at the 2018 level of demand.

➢ **AL NAGAH 2019**

- *Exercise Al Nagah III, third in the series of bilateral joint exercise between India and Oman* is scheduled to be held from 12 to 25 March 2019 at *Jabel Al Akhdar Mountains in Oman*.

- The exercise will see both the armies exchanging expertise and experience in tactics, weapon handling and firing, with an **aim to enhance interoperability** in counterterrorist operations in semi urban mountainous terrain.

➢ **Kumbh Mela -2019**

Prayagraj Kumbh Mela 2019 has been placed in the Guinness World Records in three sectors. It includes:

- Largest traffic and crowd management plan.

- The biggest painting exercise of public sites under paint my city scheme.

- Biggest sanitation and waste disposal mechanism.

About Kumbh Mela:

✓ The Kumbh Mela (the festival of the sacred pitcher) is anchored in Hindu mythology.

✓ It is the largest public gathering and collective act of faith, anywhere in the world.

✓ Crowds gather at the sacred confluence of the Ganga, the Yamuna, and the mystical Sarasvati. Primarily, this congregation includes Ascetics, Saints, Sadhus, Sadhvis, Kalpvasis, and Pilgrims from all walks of life.

✓ The Mela was included in the list of **"Intangible Cultural Heritage of Humanity"** by UNESCO in 2017.

➢ **Rare Diseases Day**

28 February, 2019, Rare Disease Day is an observance held on the last day of February to raise awareness for rare diseases and improve access to treatment and medical representation for individuals with rare diseases and their families. **A rare disease, also referred to as an orphan disease**, is any disease that **affects a small percentage of the population.**

✓ Most rare diseases are genetic, and are present throughout a person's entire life, even if symptoms do not immediately appear. In Europe a disease or disorder is defined as rare when it affects less than 1 in 2000 citizens.

✓ Rare diseases are characterised by a wide diversity of symptoms and signs that vary not only from disease to disease but also from patient to patient suffering from the same disease. Relatively common symptoms can hide underlying rare diseases, leading to misdiagnosis.

✓ **The most common rare diseases recorded in India are** Haemophilia, Thalassemia, sickle-cell anaemia and primary immuno deficiency in children, auto-immune diseases, Lysosomal storage disorders such as Pompe disease, Hirschsprung disease, Gaucher's disease, Cystic Fibrosis, Hemangiomas and certain forms of muscular dystrophies.

➢ **Centre for Disability Sports' to be set up at Gwalior:**

- A 'Centre for Disability Sports' will be set up at Gwalior in Madhya Pradesh. The proposal regarding setting up of it has been approved by the Government.

- *It will be registered under the Societies Registration Act, 1860*, which is to function under the name of Centre for Disability Sports, Gwalior.

➢ **Combat Casualty Drugs**

- **DRDO's medical laboratory** has come up with a range of *'combat casualty drugs'* that **can extend** the **golden hour** (the first hour after a traumatic injury, when emergency treatment is most likely to be successful) of gravely wounded security personnel till the trooper is shifted to hospital.

- It has been developed at the *Institute of Nuclear Medicine and Allied Sciences*, a laboratory of the Defence Research and Development Organisation.

- 90% of gravely wounded security personnel succumb to injuries within a few hours. And the availability of proper medical facilities can extend this golden period and help save lives. Chances of survival and minimum disability are highest when effective first aid care is given within the golden hour.

- The main battlefield emergencies are excess bleeding, sepsis, shock, hypovolemia (decreased blood volume) and pain..

➢ **WHO Strategy to fight flu pandemics**

- The World Health Organization has launched *a strategy to protect people worldwide over the next decade against the threat of influenza, warning that new pandemics are "inevitable"*.

- The *strategy meets one of WHO's mandates to improve core capacities for public health, and increase global preparedness* and was developed through a consultative process with input from Member States, academia, civil society, industry, and internal and external experts.

- *Influenza epidemics, largely seasonal*, affect around one billion people and kill hundreds of thousands annually. **WHO describes it as one of the world's greatest public health challenges**.

- **WHO's new strategy, for 2019 through 2030**, aims **to prevent seasonal influenza**, control the virus's spread from animals to humans and prepare for the next pandemic.

- It **calls for every country to strengthen routine health programmes** and to **develop tailor-made influenza programmes** that strengthen disease surveillance, response, prevention, control, and preparedness.

- It recommends annual flu vaccines as the most effective way to prevent the spread of the disease, especially for healthcare workers and people at higher risk of influenza complications.

- It also calls for the development of more effective and more accessible vaccines and antiviral treatments.

➤ **Arecanut gets its first GI tag for 'Sirsi Supari':**

- For the first time in the arecanut sector, **'Sirsi Supari' grown in Uttara Kannada has received the Geographic Indication (GI) tag.** It is cultivated in Yellapura, Siddapura and Sirsi taluks. Totgars' Cooperative Sale Society Ltd., Sirsi, is the registered proprietor of the GI.

- The arecanut grown in these taluks have **unique features such as a round and flattened coin shape, particular texture, size, cross-sectional views, taste**, etc. These features are not seen in arecanut grown in any other regions

➤ **Trends in International Arms Transfers – 2018**

The Stockholm International Peace Research Institute (SIPRI) has released *Trends in International Arms Transfers 2018 Report*. The assessment was done for a five-year period (2014-2018).

Highlights of Report

- **India was the world's second largest importer** of major arms in 2014-18 and accounted for 9.5% of the global total.

- **After eight years of holding the position of the largest importer of weapons, India has been superseded by Saudi Arabia and dropped down to become the second largest importer of weapons in the world.** Last year (for the period 2013-17), India accounted for 13% of all imports and was the world's largest importer.

- **Reasons for gradual lowering of imports by India:** Imports decreased by 24% between 2009-13 and 2014-18 (two five-year blocks), partly due to delays in deliveries of arms produced under licence from foreign suppliers, such as combat aircraft ordered from Russia in 2001 and submarines ordered from France in 2008.

- **The five biggest exporters in five-year block period 2011-2015 were the US, Russia, France, Germany and China**. The US and Russia remain by far the largest exporters, accounting for 36% and 21%, respectively, of the total global trade.

➤ **Pinaka Guided Missile**

- The indigenously developed Pinaka Guided Weapons System was successfully test fired at Pokhran desert in Rajasthan.

- Pinaka rocket systems are developed by Defence Research and Development Organisation (DRDO). The rocket system was named after Pinaka, the bow of Lord Shiva.

➤ **Pulse Polio Program -2019**

- In order to sustain polio eradication drive from the country, government has launched *Pulse Polio programme for 2019*.

- The programme aims **to protect children from the polio disease by conducting two nationwide mass polio vaccination campaigns and two to three sub-national campaigns each year**.

- More than 17 crore children of less than five years across the country will be given polio drops as part of the drive.

- To provide additional protection to children Government has also introduced the *injectable Inactivated Polio Vaccine(IPV) into its routine immunization program*.

- **India was declared polio-free country in the year 2014**.

- India's last reported cases of wild polio were in West Bengal and Gujarat on 13 January 2011.

➢ **Dam Rehabilitation and Improvement Programme**

- *The Ministry of Water Resources (MoWR), Government of India, with assistance from the World Bank, is implementing the DAM REHABILITATION AND IMPROVEMENT PROJECT (DRIP)*, which would be a six-year project.

- *The project development objectives of DRIP are:* (i) to improve the safety and performance of selected existing dams and associated appurtenances in a sustainable manner, and (ii) to strengthen the dam safety institutional setup in participating states as well as at central level.

- The **World Bank, Government of India and representatives from the states of Karnataka, Kerala, Odisha, Tamil Nadu and Uttarakhand** signed Loan Agreement for additional financing of $137 Million for the *Dam Rehabilitation and Improvement Project (DRIP)* that will help rehabilitate and modernize over 220 selected large dams.

- This additional funding of $137 million will be used for the construction of an additional spillway for *Hirakud Dam in Odisha* and in rehabilitation and improvement of other dams including strengthening the institutional, legal and technical framework for dam safety assurance within the Government of India and in the participating States.

➢ **Indian Urban Observatory & Video Call**

Ministry of Housing and Urban Affairs has launched the state-of-the-art India Urban Observatory and Video Wall.

- It is *a platform that uses data from different sources to enable analysis and visualization over a geospatial platform*. Such platforms churn out interesting analyses and visualizations by collating massive datasets.

- The **concept of Urban Observatories was formally initiated at the *UN Habitat-II Conference in 1997 in Istanbul***.

- It is an important component of the recently launched *Data Smart Cities strategy* that envisions creating **a 'Culture of Data' in cities, for intelligent use of data in addressing complex urban challenges**.

➢ **National Mission on Transformative Mobility and Battery Storage**

The Union Cabinet has approved setting up of a *National Mission on Transformative Mobility and Battery Storage*.

- The Mission will have **an Inter-Ministerial Steering Committee chaired by Chief Executive Officer (CEO), NITI Aayog** to promote clean, connected, shared, sustainable and holistic mobility initiatives.

- The Mission will also launch the **Phased Manufacturing Programmes (PMP)** for Batteries and for Electric Vehicle components.

- The mission will **finalise and implement strategies for transformative mobility and Phased Manufacturing Programmes (PMP)** for electric vehicles, their components and batteries.

- The Mission will have a **'Make in India' strategy** for EV components as well as battery technologies.

- The mission will drive **mobility solutions that will bring in significant benefits to the industry, economy and country**. These solutions will help improve air quality in cities along with reducing India's oil import dependence and enhance the uptake of renewable energy and storage solutions.

- The mission will also lay down the strategy and roadmap which will enable India to leverage upon its size and **scale to develop a competitive domestic manufacturing ecosystem for electric mobility**.

➢ **Idukki's Marayoor Jaggery gets GI tag:**

The Marayoor Jaggery, the traditional and handmade product from Idukki district of Kerala, has received the Geographical Indication (GI) tag from the Central Government.

- The Jaggery is produced in Marayoor, a town in Idukki district of Kerala. It is made from sugarcane and **no chemicals are added** during the manufacturing process.

- It is **not produced in modern factories or using modern equipment**. It is prepared in sheds located on the sugarcane farm.

➢ **International Women Day**

- *International Women's Day is celebrated on March 8 every year*. It is a day when the world comes together to appreciate womanhood and their importance in society. The day also celebrates the social, economic, cultural and political achievements of women.

- This year the themes for International Women's Day are *#BalanceforBetter, which is described as a "call-to-action for driving gender balance across the world" and "More Powerful Together"*. The themes stress upon the need for more men to get involved in the fight against gender equality and feminism.

➢ **Bolo App**

Google has launched a new application called 'Bolo' that aims to help children in primary school to read in Hindi and English.

- The app, which is being launched in India first, uses **Google's speech recognition and text-to-speech technology**.

- It comes with a built-in fun and helpful reading buddy, **an animated character called 'Diya'**. The reading material available on the app will be completely free of cost.

➢ **India has sealed a $3-billion deal with Russia for leasing a nuclear-powered attack submarine for the Indian Navy for a period of 10 years.**

- **Under the pact, Russia will have to deliver the Akula class submarine, to be known as Chakra III**, to the Indian Navy by 2025.

- **It will be the third Russian submarine to be leased to the Navy**. India Navy has taken two more submarines from Russia on lease. The first Russian nuclear-powered submarine — christened **INS Chakra** — was taken in 1988 under a three year lease. A **second INS Chakra** was taken on lease in 2012 for a period of 10 years.

➢ *The Odisha government has launched boat ambulance service for those living in the remote villages near Bhitarkanika National Park* in Kendrapara district. It is meant to ferry people to hospitals and clinics in case of emergency.

➢ **Global MPI(Multidimensional Poverty Index) 2018**

Global MPI 2018 Report prepared by the **United Nations Development Programme (UNDP)** and the **Oxford Poverty and Human Development Initiative**.

Highlights :

• The report, covering 105 countries, dedicates a chapter to India because of this remarkable progress. However, India still had 364 million poor in 2015-16, the largest for any country, although it is down from 635 million in 2005-06.

• **In India, poverty reduction among children, the poorest states, Scheduled Tribes, and Muslims was fastest**.

• Although **Muslims and STs reduced poverty the most over the 10 years, these two groups still had the highest rates of poverty**.

• **Bihar was the poorest state in 2015-16**, with more than half its population in poverty. **The four poorest states —Bihar, Jharkhand, Uttar Pradesh, and Madhya Pradesh** — were still home to 196 million MPI poor people, which was over half of all the MPI poor people in India.

• **Jharkhand had the greatest improvement**, followed by Arunachal Pradesh, Bihar, Chhattisgarh, and Nagaland.

• The report measures multidimensional poverty index, which it says can be broken down to show **"who is poor" and "how they are poor"**.

➢ **Langkawi International Maritime & Aerospace Exhibition (LIMA)**

INS Kadmatt at Langkawi, Malaysia to Participate in LIMA-19.

• The Langkawi International Maritime & Aerospace Exhibition (LIMA) is the largest show of its kind within the Asia Pacific region.

• Its impressive list of international exhibitors and suppliers is more than matched by the supportive presence of industry elites, which range from senior Government officials, and military and civil delegates, to industry movers and shakers and more.

• **Held biennially since its debut in 1991**, LIMA is an ideal platform where industry stakeholders could engage and expand their networks towards forging new partnerships and business agreements.

• **Indian Air Force is participating in the Maritime Aero Expo for the first time**, during which it will showcase its indigenously developed LCA fighter aircraft.

➢ **Turing Award**

Three pioneers in **artificial intelligence** — a senior Google executive, Facebook's chief AI scientist, and an academic — were announced as the winners for this year's A M Turing Award.

• It is often **described as the "Nobel Prize for computing"**.

- Given by the Association for Computing Machinery (ACM), the A M Turing Award carries $1 million as prize money.

- It is for major contributions of lasting importance to computing.

- First awarded in 1966, it has been awarded annually for 53 years so far to 70 recipients.

➢ **Dhanush Howitzers Inducted Into Indian Army**

Four indigenous Dhanush Howitzer guns were inducted to the Indian Army.

- Dhanush Long Range Artillery Guns are the first ever indigenous 155 mm x 45 calibre long-range artillery guns.

- They are equipped with inertial navigation-based sighting system, auto-laying facility, on-board ballistic computation and an advanced day and night direct firing system.

- They are improved version of Bofors guns acquired by India between 1987 and 1991.

- It has a new maximum effective range of 38 kilometers in salvo mode.

➢ *Superstats, a new metrics to analyse the game of cricket*

Superstats, a new metrics to analyse the game of cricket, has been *launched by ESPNcricinfo in partnership with Indian Institute of Technology Madras*.

- *Superstats is a combination of stats metrics – Luck Index, Forecaster and Smart Stats* that uses Data Science for the first time to give a context to every event in a game and also venture into new territories such as luck and forecasting.

- These metrics have been derived from ESPN cricinfo's rich ball-by-ball database, and from complex algorithms developed by IIT Madras and Gyan Data, an IIT-M incubated company.

➢ **WEF Energy Transaction Index**

World Economic Forum has released its global Energy Transition index. The annual list ranks 115 economies on their ability to balance energy security and access with environmental sustainability and affordability.

- **Sweden retained its top spot on the list,** followed by Switzerland and Norway in the second and third positions respectively.

- The United States, which is placed at the 27th position, was found to have made progress in reducing the use of coal in power generation.

- The developing countries in Asia, on the other hand, showed significant improvements towards universal access to electricity led by India (76), Indonesia (63) and Bangladesh (90).

- While India scored low in terms of system performance, it ranks considerably higher when it comes to readiness to adapt to future energy needs. **Overall, India has moved up two places from its 78th position in 2018.**

➢ **CHINOOK Helicopter**

The first batch of four Boeing heavy-lift Chinook Helicopters, CH-47F (I) were recently **inducted in Indian Air Force (IAF).**

- The CH-47F (I) Chinook is an advanced multi-mission helicopter that will provide unmatched strategic airlift capability to the Indian armed forces across the full spectrum of combat missions.

- With capability of carrying around 10 tonnes of load, these helicopters will be used for lifting artillery, vehicles, battlefield resupply, road construction and engineer equipment as well as transportation of troops and supplies to mountainous sectors in North and North-East.

- These are also used for humanitarian and disaster relief operations such as transportation of relief supplies and mass evacuation of refugees.

- **Chinooks have a unique twin engine and tandem rotor design, one of the most visibly recognised symbols of the American armed forces**.

➢ **ABHEDYA**

It is Indian Navy's state of the art Nuclear, Biological and Chemical Training Facility (NBCTF) which was inaugurated recently at INS Shivaji, Lonavala.

- The new facility is expected to help train personnel of naval ships fitted with nuclear, biological and chemical detection and protection systems.

- The **nuclear training facility** will help Indian Navy in providing realistic simulation of Nuclear, Chemical and Biological warfare to its personnel during their NBC damage control training, which was till now largely limited to theoretical training.

➢ **World water day – 22 March**

- *The theme for World Water Day 2019* is 'Leaving no one behind,' which is the central promise of the 2030 Agenda for Sustainable Development: as sustainable development progresses, everyone must benefit.

- *Sustainable Development Goal 6 (SDG 6)* aims to ensure availability and sustainable management of water for all by 2030. By definition, this means leaving no one behind.

- **In 2010, the UN recognized "the right to safe and clean drinking water and sanitation as a human right** that is essential for the full enjoyment of life and all human rights."

➢ **HIKIKOMORI**

- **Hikikomori** is **a psychological condition which makes people shut themselves off from society, often staying in their houses for months on end.**

- There are **at least half a million of them in Japan**. It was once thought of as a young person's condition, but sufferers are getting older and staying locked away for longer.

➢ **Skytrax World Airport Awards 2019:**

Skytrax World Airport Awards lists the Best 100 Airports of the World. It has been released by the **UK-based Skytrax**. The Awards are based on votes of customers in a global airport customer satisfaction survey.

- **Singapore's Changi Airport** has been crowned the **world's best aviation hub** for the seventh time in a row.

- **Indira Gandhi International Airport of New Delhi is at rank 59.**

➤ *Special stamp cover on Ice Stupa*

The *Indian Department of Post has released a 'special stamp cover on Ice Stupa'*.

• The special stamps aim *to create awareness about depleting glaciers and affect the ecology around the Himalayas*.

• The idea behind artificial glaciers is to freeze and hold the water that keeps flowing and wasting away down the streams and into the rivers throughout the winter. Instead, this ice will melt in the springtime, just when the fields need watering.

• **The idea of the Ice Stupa project was conceptualised by HIAL founder Sonam Wangchuk** to reduce problems of Ladakhi farmers in spring.

• The Ice Stupa is a survival technique that has been developed over a period. Each stupa has the capacity to store at least 30-50 lakh litres of water. This is apart from the naturally saved water in the slopes of mountains.

➤ **U.S. Mathematician Becomes First Woman To Win Abel Prize, 'Math's Nobel'**

The Abel Prize in mathematics was awarded to **Karen Uhlenbeck** of the U.S. for her work on **partial differential equations**, the first woman to win the award.

 Abel Prize

• It is a **Norwegian prize awarded annually by King of Norway** to one or more outstanding mathematicians. The prize is named after 19th century Norwegian mathematician Niels Henrik Abel.

• It was established by the Norwegian government in 2002 on the occasion of the 200th anniversary of Niels Henrik Abel's birth.

• The main objective of Abel Prize is to recognize pioneering scientific achievements in mathematics.

➤ *International Workshop on Disaster Resilient Infrastructure (IWDRI)*

An *International Workshop on Disaster Resilient Infrastructure (IWDRI) is being organised by the National Disaster Management Authority (NDMA) in collaboration with United Nations Office for Disaster Risk Reduction (UNISDR)*, and in partnership with the Global Commission on Adaptation, United Nations Development Programme and the World Bank.

The workshop aims to

• identify good practices of disaster risk management in key infrastructure sectors,

• identify specific areas and pathways for collaborative research on DRI (Transport, Energy, Telecom and Water),

• discuss and co-create the broad contours of the Coalition for Disaster Resilient Infrastructure (CDRI) as well as a notional roll-out plan for the next three years, and

• build a forum for members to work on areas of common interest and make specific commitments.

➤ *Sary-Arka-Antiterror 2019*

• The Shanghai Cooperation Organization's (SCO) member states will hold *a joint anti-terrorism exercise "Sary-Arka-Antiterror 2019."* The decision to hold a joint exercise was announced during the 34th meeting of the RATS council held in Tashkent, Uzbekistan.

- Chaired by Russia, the meeting also declared plans to hold the first stage of *the joint border operation "Solidarity 2019-2021,"* the 7th meeting of the heads of the border services, and training workshops on identifying and preventing the use of the Internet for terrorist, separatist and extremist purposes.

➢ **AFSPA in Arunachal Pradesh**

After 32 years, the controversial Armed Forces (Special Powers) Act, which gives sweeping powers to security forces, was partially removed from three of nine districts of Arunachal Pradesh but would remain in force in the areas bordering Myanmar.

➢ **Reiwa**

Japan on April 1, 2019 declared 'Reiwa' as *the name of its new imperial era that will begin on May 1, 2019 once the new Crown Prince Naruhito ascends the Chrysanthemum Throne*.

- Crown Prince Naruhito will succeed his father Emperor Akihito, who will abdicate the empire on April 30, 2019, putting an end to three decades long **'Heisei' era**.

- **The new era will be the 248th in the history of Japan**.

- Japan's emperor has no political power, but remains a highly symbolic figure.

➢ **Indian Army built longest suspension bridge at Leh**

- The **Indian Army has successfully built the longest suspension bridge 'Matiri Bridge' over the Indus River in the Leh-Ladakh region**.

- Suspension Bridge constructed over Indus River by Combat Engineers 'Fire & Fury Corps'.

- The 260-feet long suspension bridge was built in a record time of 40 days.

➢ **5G Networks**

South Korea will launch world's first 5G mobile networks on April 5, 2019. *South Korea will be the first country to launch 5G networks*.

➢ **Battle of Kangla Tongbi**

The Platinum Jubilee of the Battle of Kangla Tongbi War was commemorated on 07 Apr 2019 by Army Ordnance Corps at Kangla Tongbi War Memorial near Imphal honouring the valiant brave hearts of Ordnance Personnel of 221 Advance Ordnance Depot who made their supreme sacrifice in the line of duty during the battle of World War-II on the night of 6/ 7 April 1944.

- It is considered one of the fiercest *battles of World War II*. It was *fought by Ordnance personnel of 221 Advance Ordnance Depot (AOD) on the night of 6/7 April 1944* against *Japanese forces*. *Japanese forces had planned a three pronged offensive to capture Imphal and the surrounding areas*.

- The Kangla Tongbi War Memorial is a mute testimony to this battle and the unflinching devotion to duty of the Ordnance personnel of 221 AOD, 19 of whom made the supreme sacrifice.

➢ **Toluene**

• **Toluene is one of the petrochemical wastes** that get released without treatment from industries such as refineries, paint, textile, paper and rubber.

• Toluene has been reported to cause serious health problems to aquatic life, and studies point that it has genotoxic and carcinogenic effects on human beings.

➢ **Kandhamal Haldi (turmeric)**

Odisha's Kandhamal Haldi (turmeric), famous for its healing properties, has received GI tag.

• The golden yellow spice, named after the district where it is produced, has been cultivated since time immemorial and is known for its medicinal value.

• Turmeric is the main cash crop of tribal people in Kandhamal. Apart from domestic use, turmeric is also used for cosmetic and medicinal purposes.

• More than 60,000 families (nearly 50% of Kandhamal population) are engaged in growing the variety. The crop is sustainable in adverse climatic conditions.

➢ *Resilient Cities Asia-Pacific (RCAP) Congress* **2019**

4th *Resilient Cities Asia-Pacific (RCAP) Congress* 2019 was recently organized by *the International Council for Local Environmental Initiatives (ICLEI)* in association with South Delhi Municipal Corporation.

• It is **the annual global platform for urban resilience and climate change adaptation**.

• It is **convened by ICLEI – Local Governments for Sustainability and co-hosted by the World Mayors Council on Climate Change and the City of Bonn**.

• It was **launched in 2010 with the goal of forging partnerships and dialogues that matter**.

➢ **New early human species : Homo luzonensis**

Researchers have unearthed an *unknown human species that lived on an island in Philippines some 50,000 years ago*– *Homo luzonensis*.

• The newfound species is named **Homo luzonensisin honor of Luzon, the island where the mysterious beings lived during the late Pleistocene epoch, more than 50,000 years ago. They were less than four feet tall**.

• Though luzonensisis short like the hobbit, it shares features with a number of other ancient human relatives.

• It has curved foot and finger bones like Australopithecus(a genus that includes the famous Lucy); premolars that have characteristics similar to those seen in Australopithecus, Homo habilis and Homo erectus; and small molars that look like those of modern humans, or Homo sapiens.

➢ *UK government released a white paper on 'online harms'*

UK government has released a white paper on 'online harms'. These new rules are aimed at *limiting harmful online content*. Developing a culture of transparency, trust and accountability will be a critical element of the new regulatory framework.

- In this white paper, the UK government called for an **internet regulator with the power to issue fine, to block access to websites if necessary, and to make individual executives legally liable for harmful content spread on their platforms**.

- The **government will establish a new statutory duty of care** to make companies take more responsibility for the safety of their users and tackle harm caused by content or activity on their services. Compliance with this duty of care will be overseen and enforced by an independent regulator.

- **Companies must fulfil their new legal duties**. The regulator will set out how to do this in codes of practice. If companies want to fulfil these duties in a manner not set out in the codes, they will have to explain and justify to the regulator how their alternative approach will effectively deliver the same or greater level of impact.

- **The regulator will have the power to** require annual transparency reports from companies in scope, outlining the prevalence of harmful content on their platforms and what measures they are taking to address this. These reports will be published online by the regulator, so that users and parents can make informed decisions about online use.

➢ *Utkarsh Bangla and Sabuj Sathi schemes won the prestigious UN awards*

West Bengal's Utkarsh Bangla and Sabuj Sathi schemes have won the prestigious World Summit on the Information Society (WSIS) awards under the United Nations.

- Utkarsh Bangla and Sabuj Sathi were selected out of 1,062 nominations and they also topped the list in their respective categories.

- **Utkarsh Bangla got the topmost award and emerged a winner in the Capacity Building category**.

- **Sabuj Sathi ranked in the first five as a champion project under the ICT application: E-Government category**.

- Under Utkarsh Bangla, skill development training is given to youths. Several centres have been opened and youths are being given training there. The trained youths are then absorbed in different industries.

- Sabooj Sathi is a scheme for distribution of bicycles to the students of class IX to XII studying in Govt. run and Govt. aided Schools and Madrashas.

➢ **Bamboo rice**

- Four decades later, bamboo rice shows up in Odisha. The rare variety, which was last harvested in *Chandaka-Dampara Wildlife Sanctuary in 1979*, grows twice or thrice in a century

- Bamboo rice is special rice that is grown out of a dying bamboo shoot. When the bamboo shoot breathes its last, it flowers into a rare variety of rice seeds, which are known as bamboo rice.

➢ **Ban on e-cigarettes**

The Commerce Ministry has asked the Health Ministry to frame a law banning manufacture and sale of e-cigarettes in the country as in the absence of a domestic legislation, it would not be possible to put a blanket ban on its imports.

- 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.

➢ **David Malpass** has been appointed as the President of World Bank. He was nominated by the US president Donald Trump.

➢ **GI Certification for five varieties of Indian Coffee**

The DPIIT has recently awarded Geographical Indication (GI) to five varieties of Indian coffee.

Five Coffee varieties are

- **Coorg Arabica coffee:** grown specifically in the region of Kodagu district in Karnataka.

- **Wayanaad Robusta coffee:** grown specifically in the region of Wayanad district of Kerala.

- **Chikmagalur Arabica coffee:** grown specifically in the region of Chikmagalur district of Karnataka.

- **Araku Valley Arabica coffee:** grown in hilly tracks of Visakhapatnam district of Andhra Pradesh and Odisha region. The coffee produce of Araku, by the tribals, follows an organic approach in which they emphasise management practices involving substantial use of organic manures, green manuring and organic pest management practices.

- **Bababudangiris Arabica coffee:** grown specifically in the birthplace of coffee in India and the region is situated in the central portion of Chikmagalur district**.**

➢ **UNNATEE (Unlocking NATional Energy Efficiency potential)**

Bureau of Energy Efficiency (BEE) has developed a national strategy document- **UNNATEE (Unlocking NATional Energy Efficiency potential)**– for accelerating energy efficiency in India.

- The strategy document describes a plain framework and implementation strategy to establish a clear linkage between energy supply-demand scenarios and energy efficiency opportunities.

- The document offers a comprehensive roadmap to address India's environmental and climate change mitigation action through energy efficiency measures.

➢ **Festival of Innovation and Entrepreneurship**

Festival of Innovation and Entrepreneurship is being held in Gandhinagar, Gujarat.

- FINE is *an initiative being organised by Rashtrapati Bhavan in association with the Department of Science and Technology*, Government of India and the *National Innovation Foundation-India*.

- It will recognise, respect, showcase, reward innovations and to foster a supportive ecosystem for innovators.

- FINE will provide a platform for innovators for building linkages with potential stakeholders to develop their ideas into implementable projects for the larger social good.

- It will provide a window to showcase creative and innovative solutions for social development through innovation emerging from grassroots, student ideas and other technologies.

➢ **List of Military Exercises(with India)**

Participating country	ARMY	NAVY	AIRFORCE
Russia	Indra		
USA, Japan		Malabar	
Japan	Dharma Guardian	Sahyog-Kaijin	
USA	Yudh Abhyas, Vajra Prahar		Red Flag, Cope India
China	Hand in Hand		
France	Shakti	Varuna	Garuda
UK	Ajeya Warrior	Konkan	Indradhanush
Nepal	Surya Karan		
Bangladesh	Sampriti		
Sri Lanka	Mitra Shakti	SLINEX	
Thailand	Maitree		Siam Bharat
Indonesia	Garuda Shakti	CORPAT	
UAE			Desert Eagle
Vietnam	Vinbax		
Oman		Naseem AlBahr	Eastern Bridge
Kazakhstan	Prabal Dostyk		

Mongolia	Nomadic Elephant		
Seychelles	LAMITIYE		
Singapore	Bold Kurukshetra	SIMBEX	
Australia		Ausindex	
Kyrgyzstan	Khanjar		
ASEAN +	Force 18		
Maldives	Ekuverin		
South Africa,Brazil		IBSAMAR	

      Malayasia   Harimau Shakti

➢ **Indexes and India's Rankings**

Index	**Published by**	**India's ranking (2017)**
Global Competitiveness index	**World Economic Forum**	**58**
Global Innovation index	**Cornell University,INSEAD and WIPO**	**57**
Global Peace index	**Institute of Economics and Peace**	**136**
Human Development index	**United Nation Development Programme (UNDP)**	**130**
World Happiness Index	**United Nation Sustainable Development Solutions Network**	**133**
Prosperity Index	**Legatum Institute**	**94**
Ease of Doing Business index	**World Bank**	**77**
Corruption Perception Index	**Transparency International**	**81**
Global Talent Competitiveness index	**Global business school INSEAD in partnership with Adecco Group and Human capital Leadership Institute (HCLI) of Singapore.**	**81**

Inclusive development Index	World Economic Forum	62
Climate Change Performance Index	German NGO and Climate Action Network Europe	14
Logistics Performance Index	World Bank's	35
World Press Freedom Index	Reporters Sans Frontières (RSF)	138
Sustainable Development Goals Index	Sustainable Development Solutions Network(SDSN)	116
International Intellectual Property Index	US Chamber of Commerce's GIPC	44
Global Hunger Index	International Food Policy Research Institute (IFPRI)	103
Global Human Capital Index	World Economic Forum	158
Travel and tourism Competitiveness Index	World Economic Forum	40

➢ **Space Missions in News :**

MISSION	OBJECTIVE
HAYABUSA 2	Launched by JAXA,Japan, is enroute to **asteroid** 162173 Ryugu.
OSIRIS-REx	Launched by NASA, is en route to **asteroid** 101955 Bennu.
ARTEMIS P1/P2	Launched by NASA, are studying the effect of the solar wind on the **Moon**. Originally launched as Earth satellites, they were later repurposed and moved to lunar orbit.
Lunar Reconnaissance Orbiter	Launched by NASA, is engaged in **lunar** mapping intended to identify safe landing sites, locate potential resources on the **Moon**, characterize the radiation environment, and demonstrate new technology.
Akatsuki	The first **Japanese** Venusian probe. Also known as *Planet-C* and *Venus Climate Orbiter*, **Akatsuki** failed to enter Venusian orbit in December 2010. It continued to function and **entered Venus orbit in 2015**.
2001 Mars Odyssey,	A tribute to the classic novel and film, is one of six currently active human-made Mars satellites. It is continuing its extended mission to map the surface of Mars and also acts as a relay for the **Curiosity** and **Opportunity rovers**. Launched by NASA.

Mars Express	**ESA**; Mars orbiter designed to study the planet's atmosphere and geology, search for sub-surface water, and deploy the **Beagle lander**.
Mars Reconnaissance Orbiter	The second **NASA** satellite orbiting Mars. It is specifically designed to analyze the landforms, stratigraphy, minerals, and ice of the red planet.
Curiosity Rover	Part of NASA's Mars Science Lab (MSL),is searching for evidence of organic material on **Mars**, monitoring methane levels in the atmosphere, and engaging in exploration of the landing site at **Gale Crater**.
Mangalyaan	Is the first **Indian** interplanetary space probe. It was successfully inserted into orbit of Mars on 24 September 2014.
Mars Atmosphere and Volatile EvolutioN Mission (MAVEN)	It is a space probe developed by NASA designed to study the Martian atmosphere while orbiting Mars. Mission goals include determining how the planet's atmosphere and water, presumed to have once been substantial, were lost over time.
Trace Gas Orbiter (ExoMars 2016)	Launched by ESA is carrying the lander Schiaparelli ,scheduled to use atmospheric braking for some months before commencing data collecting operations.
Dawn	NASA;successfully entered asteroid Vesta's orbit in July 2011. There it studied Vesta until September 2012, when it departed for dwarf planet Ceres
Juno	Launched by NASA to scientifically investigate Jupiter andis in polar orbit around Jupiter .
Cassini Orbiter	NASA,Began studying Saturn and its moons after passing Venus and Jupiter and deploying the Huygens Landing Probe to Titan. It is primarily investigating Saturn's rings, its magnetosphere and the geologic composition of its satellites; **ended in 2017**
New Horizons	**NASA;Is the first spacecraft to study Pluto up close**, and ultimately the Kuiper Belt. It is the fastest artificially-accelerated object and will be the fifth probe to leave the solar system.
Voyager 1	NASA;Is currently the farthest man-made object from Earth, as well as the **first object to leave the Solar System** and cross into interstellar space. **It was originally tasked with investigating Jupiter and Saturn, and the moons of these planets**.
Voyager 2	**Has left the solar system**. Its mission to study all four gas giants. Scientists are now using Voyager 2 to learn what the solar system is like beyond the heliosphere.

Rosetta	Operated by ESA, is orbiting the comet 67P/Churyumov–Gerasimenko. On November 12, 2014, a lander was successfully deployed for further investigation. Mission ended on 30 September 2016, when the probe landed onto the comet's surface.
Messenger	**NASA**;was **studying Mercury**. It is **only the second probe to do so and is the first to orbit the planet.** Technologically, it is far superior to its **1975 predecessor**, **Mariner 1**0. Having previously passed Earth once, Venus twice and Mercury three times, it entered orbit in March 2011. Mission ended on 30 April 2015, when the probe crashed onto the planet's surface.