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Union Government launches National Biopharma Mission

Why is in news?

- The Union Ministry of Science & Technology has launched National Biopharma Mission, a first ever Industry-Academia mission to accelerate biopharmaceutical development in India.
- Under this mission, the ministry also launched Innovate in India (i3) program to create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing in the sector, and create a globally competitive biopharmaceutical industry that addresses the country’s major concerns around barriers to affordable healthcare.

Need of the program:

- India has been an active player in the global pharmaceutical industry and has contributed towards making life-saving drugs and low-cost pharmaceutical products accessible at affordable rates. Despite these advances, Indian biopharmaceutical industry is still 10-15 years behind their counterparts in the developed countries and faces stiff competition from Korea, China and others.
- The lacuna primarily exists due to disconnected centers of excellence, less focus on translational research, and uncertain funding. So there was an immediate need to consolidate efforts to promote product discovery, translational research, and early stage manufacturing in the country to ensure inclusive innovation.

About Innovate in India (i3) program:

- It is a 250 million USD program of the Department of Biotechnology (DBT) and Ministry of Science & Technology in collaboration with World Bank. It will be implemented by Biotechnology Industry Research Assistance Council (BIRAC), a Public Sector Enterprise, set up by DBT.
- It is a first-of-its-kind mission that brings together industry and academia to promote entrepreneurship and indigenous manufacturing in the biopharmaceutical sector.
- To increase India’s global biopharmaceutical market share from current 2.8% to 5% and generate additional business opportunity of $16 billion.
- The program will help to innovate, co-create, and co-facilitate scientific discoveries and offer young entrepreneurs an avenue to engage with the best in the industry.

About National Biopharma Mission:

The mission aims to enable and nurture an ecosystem for preparing India’s technological and product development capabilities in biopharmaceuticals to be globally competitive level over the next decade. It will also strive to transform the health standards of India’s population through affordable product development.

The mission will be implemented by Biotechnology Industry Research Assistance Council (BIRAC), a PSU of Department of Biotechnology.

The mission will concentrate on development of specific products such as vaccines, medical devices, biotherapeutics and diagnostics etc. Besides, it will also work on establishment of shared
Railways, NBCC ink MoU to redevelop 10 railway stations

- Rail Land Development Authority (RLDA) has inked MoU with National Building Construction Corporation (NBCC) for redevelopment of 10 railway stations across the country on global standards.
- The identified stations to be taken up initially by NBCC, a PSU of Urban Development Ministry for redevelopment are Tirupati, Nellore, Puducherry, Sarai Rohilla (Delhi), Madgaon, Lucknow, Gomtinagar, Kota, Thane (New) and Ernakulam. **RLDA is an arm of the Indian Railways for commercial exploitation of rail land.**

**Key Facts**

- As per the MoU, a Special Purpose Vehicle (SPV) will be formed at the national level as a Joint Venture (JV) company between RLDA and NBCC on 50:50 shareholding basis. The SPV in turn will enter into City Support Agreements (CSA) with respective cities for the redevelopment of stations and commercial development on Railway land in alignment with the Smart City Plans of respective cities.
- RLDA will lease out the land to the SPV for a fixed lease period of up to 45 years at a nominal token cost for development and NBCC as Project Management Consultant will execute the project work on behalf of SPV.
- Earnings from the commercial development of land parcels at stations will be utilized to redevelop the stations for creating necessary infrastructure and better passenger amenities. The surplus earnings will go to RLDA which would in turn would be remitted to Zonal railways.
- The entire revenue from lease revenues from built up spaces will be deposited in an SPV’s ESCROW account which is to be managed by a Committee to be formed.

**Background**

The Indian Railways has embarked on an ambitious project to redevelop 403 stations with the participation of private players, public sector and foreign agencies. It has taken up this redevelopment programme of stations in a big way by adopting a multi-pronged strategy. It has chosen PPP model and is also roping in varied agencies to execute the project namely its own PSUs, other Central government PSUs, foreign countries through government-to-government (G2G) cooperation and state governments. Earlier in October 2016, MoU was also signed between the Railway Ministry and Urban Development Ministry for integrated planning for redevelopment of railway stations in the cities included in the Smart Cities Mission and AMRUT schemes.

**Prison Reforms**

**Why In news?**

The brutal murder of a woman life convict in the Byculla women’s prison in Mumbai recently has brought the focus back on custodial violence, especially the vulnerability of inmates to authoritarian behaviour.
Issues:

- The issues range from prisoners’ rights, health, hygiene and access to legal aid, to the condition of women inmates and their children. Over the past years, incidents of murder, suicides and attacks on other prisoners have been reportedly increased.
- The overcrowding of prisons in the country is a long-standing problem. The Supreme Court itself highlighted that prisons in Delhi and nine States have an occupancy rate of 150 per cent of their capacity. The average occupancy in all jails in the country was 117.4 per cent, as of December 31, 2014.
- Crammed conditions in prison militate against the prisoner’s right to good health and dignity. An excessive prison population creates problems of hygiene, sanitation, management and discipline.
- Of equal concern are the available staff strength and the level of training they receive.
- A little over two-thirds of India’s prisoners are under trials. Poverty remains the main reason for this, as most prisoners are unable to execute bail bonds or provide sureties. Since 2014, there is some effort to invoke Section 436A of the Code of Criminal Procedure, under which under trials who have completed half of the maximum jail term specified for their offences may be released on personal bonds.
- Corruption, discrimination and inequality: Not all prisoners are treated in same way. Politicians get better treatment, whereas general public have to undergo inhuman conditions.
- In the last half century, the superior courts have passed a series of orders to reform jails but the government both at centre and states is not taking such orders seriously.

Failing to address the problem of crowded jails may prove costly for the administration of criminal justice. Prison reforms must be directed at securing the rights of inmates. State is under an obligation to protect the residuary rights of prisoners after they surrender their liberty to a legal process.

Way forward:

- The management of prisons must be marked by firm discipline.
- Due regard should be given to the human rights of prisoners.
- Basic facilities in jail to ensure skill development of a criminal, such that he/she can earn a basic living once his term of punishment is over.
- Having a proper policy for parole and furloughs and disseminating information about the same to prisoners so that everyone can exercise this right.
- Having a policy of rehabilitation of criminals in society as productive members.

MERIT app

The government has launched the ‘MERIT app (Merit Order Dispatch of Electricity for Rejuvenation of Income and Transparency)’ and the e-bidding portal for providing e-Bidding solution to States to select Independent Power Producers (IPPs) for procurement of power by transferring their domestic coal under the scheme of flexibility in utilization of domestic coal.

Key facts:

The web portal and mobile app for Merit Order Dispatch of Electricity (MERIT) have been developed in association with POSOCO. The app displays extensive array of information regarding the merit order such as daily state-wise marginal variable costs of all generators, daily source-wise power purchases of respective states/UTs with source-wise fixed and variable costs, energy volumes and purchase prices. The app also gives information regarding reasons for deviation from merit order such as must run conditions, transmission constraints etc.

The advantages of MERIT app are as follows:

- Empowerment of the Consumer and participative governance.
- Transparent information dissemination pertaining to marginal variable cost and source wise purchase of electricity.
- Promotes economy and efficiency in operations. Helps understand the utility portfolio and its complexity.
- Optimization of the power procurement costs.
- Facilitates renewable integration and handling of the variability and uncertainty of renewables.
- Indication of supply side reliability and adequacy.
- The flexibility in utilization of domestic coal scheme envisages transferring coal to more efficient IPPs generating stations, leading to lower generation costs and ultimately lesser cost of electricity for the consumers.

**Background**
The merit order stack is a common approach to the problem of minimizing the sum of generators’ operating costs while honoring the operational constraints of the available generation to supply the demand in a secure and reliable manner. The Tariff Policy, 2016 provides that the States/DISCOMs shall follow merit order for procurement of power and there should be uniformity in merit order mechanism. The adherence to merit order optimizes the power procurement cost and benefits both utility and ultimate consumer.

**Selection of ECs must be transparent, SC tells Centre**

**Why in news?**
The Supreme Court has posed several pointed questions to the Centre regarding the lack of proper procedure for appointment of Chief Election Commissioner and Election Commissioners. The issue came up to the court based on a petition seeking a direction to the Centre to constitute a “neutral and independent selection committee” to recommend names for the post of Chief Election Commissioner and Election Commissioners.

**Background:**
- The plea alleged that the Centre’s practice in appointing the member of Election Commission was discriminatory and violation of law, which obligate executive/legislature to make law for ensuring a fair, just and transparent selection process for election commission.
- It also argued that the practice of appointing the member to the Election Commission without making law for a fair, just and transparent process of selection by constituting an independent and neutral collegium/selection committee to recommend the name, is in violation of Article 14 and 324(2) of the Constitution of India and is in vogue continuously since adoption of the Constitution.

**Current practice:**
Currently, the Prime Minister and his council of ministers decide who will be election commissioner. On their advice, the President then appoints the commissioner.

**SC allows abortion of ailing foetus**

**Why in news?**
The Supreme Court has permitted a woman, who is in her 26th week of pregnancy, to abort her foetus that is suffering from severe cardiac ailments.

**Background:**
The order came after the woman and her husband had approached the apex court seeking permission to abort her foetus on grounds of abnormalities which could be even fatal to her. They had also challenged the constitutional validity of section 3(2)(b) of the Medical Termination of Pregnancy (MTP) Act which prohibits abortion of a foetus after 20 weeks of pregnancy.
- If there is a substantial possibility of the child being born with physical or mental abnormalities, as to be seriously handicapped.
India declares itself free from Bird Flu

India has declared itself free from Bird Flu (highly pathogenic Avian Influenza – H5N1 and H5N8) and notified it to the World Organisation for Animal Health. The move will help it resume export of poultry products to the countries which had banned trade in such items early this year.

Avian influenza or Bird flu:

Avian influenza, commonly called bird flu, is an infectious viral disease of birds with a tendency of causing largescale outbreaks of serious disease. Although most influenza viruses do not infect humans, A(H5N1) and A(H7N9) have caused serious infections in people.

World Organization for Animal Health:

The World Organisation for Animal Health is recognised as a reference body by the World Trade Organization. It has 181 countries as its members. This global body keeps tab on animal health issues and advises countries on best practices to be followed during such outbreaks. This organisation also supports countries to help them control animal diseases that cause livestock losses and pose a risk to public health.

SC questions EC reluctance to use VVPAT

The Supreme Court has questioned the Election Commission on its reluctance to use voter verifiable paper audit trail (VVPAT) units with electronic voting machines for the Gujarat Assembly polls in 2017, warning the poll panel against making excuses and compelling the court to force its hand.

Background:

This was based on a petition appealing against a Gujarat High Court order dismissing a plea to direct the commission to implement the VVPAT voting mechanism in the Gujarat polls or otherwise use ballot papers to ensure a transparent, free and fair election.

What is VVPAT?

VVPAT stands for Voter-Verified Paper Audit Trail. VVPAT system maintains a physical trail of all votes cast. Small slips of paper records the details of the vote. The Election Commission (EC) first introduced VVPAT in the 2014 Lok Sabha elections.

How is it related to EVMs?

When a vote is cast on the electronic voting machine, a small paper slip bearing the name and symbol of the candidate is generated. This paper appears for about 10 seconds. The slip will then automatically fall in a sealed safe box, attached to
Online education portal Swayam

**Why is in news?**
President Pranab Mukherjee on the occasion of Guru Purnima launched four major digital initiatives in to push e-education. They are Swayam, Swayam Prabha, National Academic Depository and National Digital Library. All these digital initiatives are operational under Union Ministry of Human Resource and Development. the SWAYAM, the portal that takes high quality education to the doorstep of everyone and the SWAYAM Prabha – the 32 DTH channels operationalised for telecasting high quality educational content free of charge using the GSAT-15 satellite transponders.

Swayam: It an indigenously designed massive open online course (MOOC). With the launch of SWAYAM, India has become one of the few countries in the World which has its own online interactive learning platform that provides, not only video lectures, reading material but also assignments/quizzes that could end up in securing credits after completing the assessment system. Host all classroom courses from 9th class till post-graduation and can be accessed by anyone, anywhere at any time. More than 400 Courses are available on SWAYAM covering all the engineering and non-engineering subjects at undergraduate and post-graduate levels. The UGC has already issued Regulation that allows transfer of credits earned through the courses done through SWAYAM into the academic record of the students. It is now possible for the students and others to take courses of the prestigious IITs or IIMs without formally studying there. The platform has been constructed by Microsoft with totally indigenous efforts.

National Academic Depository: It is a digital depository of academic awards for authenticating all certificates issued by institutions. NAD will directly integrate with Boards/Universities which issue Certificates which will be verified, authenticated, accessed and retrieved in a digital depository for purpose of employment, higher education, and loans.

National Digital Library: It is a large online library containing 6.5 million books. It provides free access to many books in English and the Indian languages.

**Minimum qualifications for co-operative societies’ polls**

- Rajasthan has become the country’s first State to lay down the minimum educational qualifications for contesting elections to village cooperative societies and various other cooperative bodies. The State Cooperative Societies Rules, 2003, were amended for the purpose and notified.
- The educational qualifications will range from Class V to Class VIII for election as members of governing boards of dairy societies, farming societies, consumer societies, weavers’ societies, housing construction societies, urban banks, primary land development banks, credit societies, salary earners’ societies and cooperative unions.

**Garib Nawaz Skill Development Centres:**

- The government is planning to establish Garib Nawaz Skill Development Centres in 100 districts of the country.
- These centres will effectively ensure employment oriented skill development of youth belonging to Minority communities.
- In next six months, Garib Nawaz Skill Development Centres, providing job oriented skill training in various fields, will be established in Hyderabad, Noida, Lucknow, Jaipur, Nagpur, Aurangabad, Bhopal, Indore etc.

**Launch of a new tax payer service module ‘Aaykar Setu’**

- To help in reducing physical interface between assesses and tax assessing authorities and thereby minimizing the chances of any tax harassment.

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Pragnya IAS Academy 9880487071 www.upsccivilservices.com
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To directly communicate with the taxpayers, on a range of multiple informative and useful tax services aimed at providing tax information at their fingertips.

- The module compiles various tax tools, live chat facility, dynamic updates, and important links to various processes within the Income Tax Department in a single module.

- The taxpayers will also be able to receive regular updates regarding important tax dates, forms and notifications on mobile numbers registered with the ITD.

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**Launch of JIGYASA – Student-Scientist connect programme**

This program implementation by Council of Scientific and Industrial Research (CSIR) and Kendriya Vidyalaya Sangathan (KVS), one of the major initiatives of the CSIR at the national level during its Platinum Jubilee Celebration Year.

- Connecting school students and scientists so as to extend student’s classroom learning with that of a very well-planned research laboratory-based learning.
- The programme will connect 1151 Kendriya Vidyalayas with 38 National Laboratories of CSIR and will target 100,000 students and 1000 teachers every year.
- Under the programme, the CSIR would launch a talent hunt among the visiting students for furthering the cause of scientific development.

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**Programme 17 for 17**

- It is a 17 point action plan for 2017 – for building digital campuses and high quality education.
- The action plan covers measures like universal adoption of digital education, digital financial transactions in the campuses from the current academic year.
- It was adopted at the end of the recently concluded National Convention of Vice Chancellors of all Universities in the Country, and Heads of IISc/IITs/IIMs/NITs/IIITs.

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**UDAY covers 97% of discom debt**

**Why is in news?**

The Union Ministry of Power has announced that about 97% of the total outstanding debt of all state power distribution companies (discoms) has been covered under the Ujwal DISCOM Assurance Yojana (UDAY). As on September 2015, the total debt of all state-owned discoms was Rs. 3.95 lakh crore. The 26 states and 1 UT which have joined the UDAY scheme accounted for total outstanding debt of Rs. 3.82 lakh crore. Hence, about 97% of the total outstanding debt of all State discoms has been covered under UDAY.
Issuance of bonds:
The total liability opted by states for restructuring through the issuance of bonds under the scheme was Rs. 2.69 lakh crore. So far, **states have issued bonds** of Rs. 2.09 lakh crore and **discoms have issued bonds** worth Rs. 0.23 lakh crore. Bonds worth Rs. 0.37 lakh crore are yet to be issued by various discoms. Hence, about 86% of the restructurable debt of states has been restructured so far under UDAY.

**About Ujwal DISCOM Assurance Yojana (UDAY):**

- The UDAY Scheme was launched by **Union Power Ministry** for the financial turnaround and revival package for electricity distribution companies of India (DISCOMs). It aimed to help to make discoms financially and operationally healthy so they can supply adequate power at affordable rates and play important role in Union Government’s ambition of meeting target of 100% Village electrification and 24X7 Power For All.
- Under it, state governments were to take over up to 75% of their respective discoms’ debt by issuing sovereign bonds to pay back the lenders. Remaining 25% of debt will be issued by discoms in the form of bonds.
- UDAY envisages to have a permanent solution for past as well as potential future issues of the power sector such as reducing the interest burden on the discoms by allowing the states to take over the bulk of their debt, reduce the cost of power, increase the operational efficiencies of the discoms by providing capital and infrastructure like coal linkages and reduce in AT&C and transmission losses.

**Government sets up new wing to provide intelligence inputs**

The Union Government has set up **Directorate General of Analytics and Risk Management (DGARM)**, a new wing to provide intelligence inputs taking action against tax evaders. It has been has been set up will be **under the Central Board of Excise and Customs (CBEC)**. It will also do big data analytics for taxmen for better policy formulation.

**Key Facts:**

The DGARM was set up on 1 July 2017, coinciding with rollout of Goods and Services Tax (GST). It will function as an apex body of CBEC for data analytics and risk management and will report to the chairman of CBEC. It will utilize internal and external data sources for detailed data mining and analysis to generate outputs for focused and targeted action by field formations and investigation wings of the CBEC. The field formations of CBEC are also expected to gainfully and effectively utilise the data and other inputs shared by the DGARM. The data analytics and processing coupled with intelligence inputs by DGRAM will provide the CBEC the national and sub-national perspective for policy formulation.

**Cabinet approves SASEC Road Connectivity Investment Program**

The Cabinet Committee on Economic Affairs chaired by the Prime Minister has given its approval for upgradation and widening of 65 kms of **Imphal-Moreh Section of NH-39 in Manipur**. The project is being developed with ADB’s loan assistance under the **South Asian Sub-Regional Economic Cooperation (SASEC)** Road Connectivity Investment Program. The project corridor is also a part of the Asian Highway No. 01 (AH01) and acts as India’s Gateway to the East. Thus trade, commerce and tourism in the region will get a boost.

**SASEC Road Connectivity Investment Program (SRCIP):**

SRCIP is a strategic initiative that aims to achieve regional integration among the members of the SASEC group by improving road connectivity within the North Bengal-North Eastern Region in India. **The members of SASEC group are Bangladesh, Bhutan, India and Nepal.**

**SASEC:**

Established in 2001, the SASEC program is a project based partnership to promote regional prosperity by improving cross-border connectivity, boosting trade among member countries and strengthening regional economic cooperation. **ADB is the secretariat and lead financier of the SASEC program,** which to date has supported a total of 46 projects worth $9.17 billion in transport, trade facilitation, energy and information and communications technology (ICT).

The SASEC, endorsed in June 2016 by the SASEC member countries, is SASEC’s first comprehensive long-term plan to promote greater economic cooperation among the member countries in the areas of transport, trade facilitation, energy, and economic corridor development, plans to extend physical linkages not only within SASEC but also with East and Southeast Asia by the next decade.
National ST Commission to take action on video films of Jaravas on YouTube

Why is in news?

- Taking suo-moto cognizance of objectionable video films and pictures of protected Jarava and other tribal communities of Andaman Islands on YouTube social media platform, the National Commission for Scheduled Tribe (NCST) has initiated action on it.
- The commission has decided to take up the matter with Ministry of Home Affairs, Ministry of External Affairs, Ministry of Information and Broadcasting, Ministry of Tribal Affairs and Chief Secretary of A&N Island for removal of these objectionable video films from YouTube and initiate action on those who uploaded these video clips on social media platform.

As per provisions of Andaman and Nicobar Island (Protection of Aboriginal Tribes) Regulation, 1956 (PAT), the Andamanese, Jarawas, Onges, Sentinelese, Nicobarese and Shom Pens have been identified as “aboriginal tribes”.

The PAT contains the provisions of protection of these communities from the outside interference.

Penalty provisions for promoting tourism through advertisement relating to aboriginal tribes has also been made in the year 2012.

Whoever enters these areas in contravention of the notification under section 7 (which prohibits entry into reserve areas) for taking photographs or making videos shall be punishable with imprisonment up to three years.

Besides, Section 3 (i) (r) of the Scheduled Castes & Scheduled Tribes (Prevention of Atrocities Act) also accords protection.

Cabinet approves revision of Indian Community Welfare Fund guidelines

The Union Cabinet has approved revision of the Indian Community Welfare Fund (ICWF) guidelines. The revised guidelines being made broad-based seek to expand the scope of welfare measures that can be extended through the Fund. The guidelines would cover three key areas namely Assisting Overseas Indian nationals in distress situations, Community Welfare activities and Improvement in Consular services. They are expected to provide Indian Missions and Posts abroad greater flexibility in swiftly addressing to requests for assistance by Overseas Indian nationals.

ICWF:

- ICWF, set up in 2009, is aimed at assisting Overseas Indian nationals in times of distress and emergency in the most deserving cases on a means tested basis.
- The ICWF would be funded through budgetary support from the Ministry, funds raised by the Indian Missions by levying a nominal service charge on consular services and through Voluntary contributions from the Indian community.
- Apart from assisting Indian nationals in distress abroad, ICWF has been a critical support in emergency evacuation of Indian nationals in conflict zones in Libya, Iraq, Yemen, South Sudan and other challenging situations like assistance extended to undocumented Indian workers in the Kingdom of Saudi Arabia during the Nitaqat drive in 2013 and the ongoing Amnesty drive in 2017.
- It has also created a sense of confidence among the migrant workers going overseas about the support they can expect from India during critical times. ICWF stands extended to all Indian Missions and Posts abroad and is primarily funded by levying service charge on various
IROAF wins Golden Peacock Award for Eco Innovation for the year 2017

Indian Railways Organization for Alternate Fuel (IROAF) has won the Golden Peacock Award for Eco Innovation for the year 2017 for Eco-Innovation substitution of fossil fuels (Diesel) by environment friendly CNG in DEMU passenger train services. Use of CNG in Train Sets for passenger transportation has been done for the first time in the world.

Golden Peacock Awards: Instituted by the Institute Of Directors (IOD), India in 1991, are now regarded as a benchmark of Corporate Excellence worldwide. Golden Peacock awards have become a hallmark of excellence, both locally & globally. Based on internationally recognised criteria, the credibility of these awards lies in the transparency depth & impartiality of the assessment process.

- IROAF is a unique organization in the Government space which was established by Ministry of Railways to explore new environment friendly fuels/ renewable energy and eco-friendly technologies like substitution of diesel with CNG/LNG in train sets, replacing acetylene/LPG by CNG/LNG for metal cutting in Railway Workshops, proliferating and promoting use of Bio-Diesel in Railway Locomotives etc.
- The organization is a premier single window agency of Indian Railways to work as a knowledge base and explore and prove out new fuels and technologies for Indian Railways with a view to being down Indian Railways fuel bill and at the same time achieve a shift towards greener fuels / renewable energy sources for a sustainable future

SC stays HC verdict on Ganga status

Why is in news?
The Supreme Court has stayed the Uttarakhand High Court order according the status of “living human entity” to Ganga and Yamuna rivers. The order came on a plea by the Uttarakhand government against the March 20 ruling of the high court. The petition said the high court verdict raised several legal questions and administrative issues.

Uttarakhand HC’s order:
- The order issued in exercise of parens patrie (authority regarded as legal protector of citizens who are unable to protect themselves) jurisdiction said “the rivers Ganga and Yamuna, all their tributaries, streams, every natural water flowing with flow continuously or intermittently of these rivers, are declared as juristic/legal persons/living entities having the status of a legal person with all corresponding rights, duties and liabilities of a living person in order to preserve and conserve river Ganga and Yamuna”.
- It also declared the Director of the Namami Gange project, the Chief Secretary of Uttarakhand and the Advocate General of the state “loco parents” — the human faces to protect, conserve and preserve the rivers and their tributaries. These officers were bound to uphold the status of the rivers Ganges and Yamuna and also to promote the health and well-being of these rivers.

Concerns raised by supreme court:
The order had put the state government in a quandary. Since the rivers flow through several states, only the Centre could frame rules for their management. The ruling also raised questions like whether the victim of a flood in the rivers can sue the state for damages and also about whether the state and its officers will be liable in case of pollution in the rivers in another state through which it flows.
Government merges Ministries of Urban Development, Housing and Urban Poverty Alleviation

The Union Government has merged the Ministries of Urban Development and Housing and Urban Poverty Alleviation to form the Ministry of Housing and Urban Affairs. With this merger, the Union Government now has 51 ministries. In 2004, there were total 42 ministries. The first government in independent India had just 17 ministries.

**Key Facts:**

- The merger of ministries involved in policy making in urban areas into single ministry will help to **ensure cohesiveness in formulating policies** related to urban issues and cut the flab in bureaucracy.
- These two ministries have a long history of mergers and de-mergers. This is third time the ministries have been merged. In 1952, they were one ministry which was known as the Ministry of Works, Housing and Supply. They were demerged in 1999, merged again in 2000 and bifurcated again in 2004.

**Background**

The recent merger of ministries was based on the recommendation of a panel of secretaries. The panel in February 2017 had recommended the merger of the two ministries to increase efficiency in governance. It had recommended that the ministries of housing and urban poverty alleviation, and urban development be merged and that the AYUSH and pharmaceuticals ministries be brought under the Health Ministry. The panel also recommended the need to corporatise the Central Public Works Department (CPWD).

**UIDAI launches mAadhaar app for Aadhaar data on phone**

The Unique Identification Authority of India (UIDAI) has launched ‘mAadhaar’, a **new mobile application for syncing Aadhaar data on mobile phones**.

The app allows users to carry their unique Aadhaar information including name, date of birth, gender, address, and the linked photograph, on their smartphones. The app also allows users to lock or unlock biometrics data.

**Features of mAadhaar**

The application allows users to have their Aadhaar profile on their mobile as a quick and convenient identification proof. It also lets users lock/unlock their biometric data that’s linked to Aadhaar via the app to secure their personal data.

- It also allows viewing and sharing updated Aadhaar profile via QR (Quick Response) code and sharing eKYC (electronic Know Your Customer) details with service providers such as telecommunications companies.
- It also has a “Time-based One-Time Password (TOTP)” feature that can be used instead of SMS (short messaging service)-based OTP (one-time password).

**UIDAI**

- **UIDAI is nodal statutory organization** behind the Aadhaar, a 12 digit unique number.
- It was granted statutory status by Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016.
- Aadhaar number is linked with an individual’s demographic and biometric information, which serves as an authentication tool throughout India.
- Using Aadhaar, Union and State Governments are trying to link many of their major development and subsidy schemes to reduce leakages and duplication

**President gives assent to Maharashtra Social Boycott Bill**

President Pranab Mukherjee has given his assent to Maharashtra Prohibition of People from Social Boycott (Prevention, Prohibition and Redressal) Bill, 2016. Maharashtra is the first state in the country to formulate a law to punish social boycott. The presidential assent paves the way for the state to strictly enforce the law to deal with the scourge of social boycott with an iron hand.
Background:
In a progressive state like Maharashtra, which has a glorious legacy of social reforms in recent times had witnessed an increasing number of incidents of social boycott and violence at the orders of caste panchayats. To overcome legal lacunae and ineffectiveness of earlier laws, state legislature had passed Maharashtra Prohibition of People from Social Boycott (Prevention, Prohibition and Redressal) Bill, 2016 in April 2016. The purpose of new law is to root out oppression carried out in name of social boycott by parallel justice delivery system (kangaroo court) by citing age old traditions, caste and religious practices.

Salient features of the Bill

- The Bill terms social boycott as a crime and says anybody indulging in it would face imprisonment maximum upto 3 years and a fine of 1 lakh rupees or both. It disallows social boycott of any individual or groups by caste panchayats or groups of individuals or gavki or by its members or by social or economically influential persons.
- Persons involved in practice of social boycott for reasons like rituals of worship, inter-caste marriage, any connection to lifestyle, dress or vocation will face stringent punishment. The offence registered under the act will be cognizable and bailable. It will be tried by a judicial magistrate of the first class.
- The victim of social boycott or any member of the victim’s family can file a complaint either to police or directly to the magistrate. The bill has indicated speedy trial within six months of filing chargesheet in such cases in order to ensure time-bound results.
- The Bill mandates state government to recruit social boycott prohibition officers to ensure monitoring and to detect offences and assist the magistrate and police officers in tackling such cases.

Bengaluru Declaration calls for SC/ST quota in judiciary

- The Bengaluru Declaration was recently adopted by the Karnataka State government sponsored Dr. B.R. Ambedkar International Conference 2017. The theme of the conference: “Quest for Equity”.
- The declaration recommends a slew of affirmative action measures in private sector, judiciary, educational institutions, government contracts and promotions for Dalits.
- The declaration has 40 recommendations under six broad categories — safeguarding the people, strengthening democratic institutions, deepening social justice, enhancing human development, ensuring responsive governance, and promoting social security.
- The Preamble of the declaration states, “This Peoples’ Declaration hopes to be a dynamic blueprint that addresses the needs and aspirations of all Indians, and a starting point for an ‘alliance of equity’ of all progressive forces committed to safeguarding the idea of India”.

Important recommendations made:

- Reserve seats for SC/ST in appointment of judges, promotions, government contracts up to ₹1 crore, in private higher educational institutions and private sector.
- Establish an Equal Opportunities Commission, to oversee affirmative action.
- Reserve seats in legislature for other backward classes. Set up of a farmers’ income commission. Uphold Rule of Law through police reforms and state action to prevent lynchings.
- Enact a law against gender and caste discrimination at education institutions. Ensure land ownership for SC/STs and establish SC/ST land bank, where government buys these lands at market prices and re-allots to the same community, to ensure non-dilution of ownership.
- Allocate 20% of the land in private housing layouts for urban poor.
- Launch a “living wage” and comprehensive social security scheme for all labourers working in the unorganised sector apart from ensuring dignity in retirement through enhanced pensions of ₹1,500 per month.
Lok Sabha passes Indian Institutes of Information Technology (PPP) Bill, 2017

The Lok Sabha passed the Indian Institute of Information Technology Public Private Partnership (IIIT-PPP) Bill, 2017 to allow 15 IIITs established on a PPP model to grant degrees and get statutory status. The bill also seeks to grant institute of national importance status to IIITs on the lines of the Indian Institutes of Technology (IITs) and National Institutes of Technology (NITs).

Background:
The Union Government had initiated the opening of 20 IIITs with private partnership of which 15 are already operational. These engineering and tech schools were established at a cost of Rs. 128 crore each. The centre had contributed 50% of the amount, states 35% and private partners remaining 15% (i.e., 50:35:15 ratio). However, these institutes were not been eligible to grant degrees.

Salient Features of the Bill

Definition of PPP: The bill define PPP as a partnership under a scheme of the centre for establishment of institutes through collaboration between the centre, the state government and industry partners such as individuals, trusts, companies or societies.

Establishment of an institute: State government will identify at least one industry partner for collaboration to establish an institute and submit a proposal to the centre. The centre will examine the proposal based on certain criteria. The centre may reject or accept the proposal with modifications. Upon such acceptance, the centre will enter into a MoU with the concerned state government and industry partners to establish proposed institute.

Role of the industry partner: It will have powers for co-creating programs as per the requirements of the industry; actively participating in the governance of the institutes; and funding and mentoring startups in the institutions.

Board of Governors: It will be the principal policy making and executive body of the institute. The Board of each institute will comprise upto 15 members including Chairman nominated on the recommendation of the centre.

Senate: It will be the principal academic body of each institute. It will specify the criteria and procedure for admission to courses of study; recommend to the Board, creation of teaching and other academic posts; and specify academic content of programmes and courses of study.

Coordination Forum: It will deliberate on matters of common interest to all the institutes. It will advise the centre to include or exclude an institution from the schedule of the Bill.

Funds of the institute: Each institute will maintain a fund consisting of funds from the government and other sources including grants, fees and donations. Further, each institute will create corpus fund of the net income of the institute and donations for its long term sustainability.

Union Cabinet nod for IWAI bond issue

The Union Cabinet gave its nod to Inland Waterways Authority of India (IWAI) to raise Rs.660 crore in bonds for extra budgetary resources (EBRs) in 2017-18. The proceeds from the bonds will be utilised by IWAI for development and maintenance of National Waterways (NWs) under National Waterways Act, 2016. Moreover, the funds received will be used exclusively for capital expenditure to improve infrastructure funding.

Modalities

The principal and interest in respect of the EBRs will be financed by the Union Government by making suitable budgetary provisions in the demand of the Union Ministry of Shipping. The interest payment on the bonds will be on semi-annual basis and the principal on maturity. The whole exercise would be undertaken by IWAI through appointment of lead managers and coordination with SEBI.

Background

Gross budgetary support from the Union Government and external financial support for funding development and maintenance of 106 new National Waterways under National Waterway Act, 2016, is grossly inadequate. So far, the World Bank has sanctioned a loan of $ 375 million (around Rs 2,421 crore) for Jal Marg Vikas Project (JMVP) along with other sources. But still there is funding gap which may be bridged by raising bonds.

About Inland Waterways Authority of India (IWAI)

IWAI is the statutory body in charge of the waterways in India. Its headquarters is located in Noida, UP. Its main function is to build the necessary infrastructure in the inland waterways, surveying the economic feasibility of new projects and also carrying out administration and regulation.

The National Waterways Act, 2016 merges 5 existing Acts which have declared the 5 National Waterways and proposes 106 additional National Waterways. The Act came into force in April 2016.
Various Railways initiatives launched

Following new railway initiatives were recently launched:

1. **RAIL CLOUD PROJECT**
2. **NIVARAN-Grievance Portal** (First IT Application on Rail Cloud).
3. Cashless treatment Scheme in Emergency (CTSE) Scheme and Handing over of 1st CTSE Card.
4. **RailCloud**: Rail Cloud works on popular Cloud Computing system. Most Important works are done through Cloud Computing. Cloud Computing is the emerging technology for faster and on demand commensurate deployment of Server resources which result in reduced cost. It is developed by rail PSU RailTel.

**Potential benefits to Railways after implementation of RailCloud are:**

- Faster and on-demand deployment of application.
- Optimum use of Servers and storage.
- Utilization of existing infrastructure as part of Cloud.
- Rapid scalability and elasticity.
- IT Security enhancement and Standardization.
- Cost reduction.
- Better user experience.

**NIVARAN-Grievance Portal**: ‘NIVARAN-Grievance Portal’ is the first IT application to be launched on the RailCloud. It is the platform for resolution of service related grievances of serving and former railway employees. The existing application was hosted on a conventional server; it has been made cloud-ready and being migrated as the first cloud application of Indian Railways. It will save significant revenue and at the same time user experience will also improve.

**Cashless treatment Scheme in Emergency (CTSE)**: To provide immediate care to its retired employees in ‘Golden Hour’ Railway Board has decided to roll out a “Cashless treatment Scheme in Emergency” (CTSE), in empanelled hospitals, for retired employees and their dependent family members. A web based system of communication between private hospitals and railway authorities has been developed wherein identity of the beneficiary shall be established using biometrics stored in Aadhar (UIDAI) server, eligibility shall be determined using Railway Data Base and emergency shall be verified by Railway Medical Officer based on private hospital’s clinical report. The whole system is online and even the bill processing shall be online. This scheme shall provide help and succor to the retired railway employees at the time of need and at the same time will have a morale boosting effect on the serving employees.

![Image of Railways initiatives](image)

## Mahadayi: Goa open to out-of-tribunal settlement

Goa has said that it is open to talks with Karnataka and Maharashtra to explore an out-of-tribunal settlement on Mahadayi issue.

**Background:**

Mahadayi, also known as the **Mandovi river**, is known as a lifeline in the northern parts of Karnataka. The river originates and flows in Karnataka and goes through Goa before meeting the Arabian Sea. The Mahadayi catchment area covers around 2,032 km and includes some parts of Maharashtra near the Maharashtra-Karnataka border region.

**About the dispute:**

The Karnataka government and Goa government are fighting on sharing of waters of the Mahadayi river (called Mandovi in Goa).

- In order to divert 7.56 tmcft of water to the Malaprabha river basin, Karnataka government proposed to build canals to link Kalasa and Banduri, the tributaries of Mahadayi. However, objecting the move, Goa government argued that if Karnataka implemented the Kalasa-Banduri project, it would prove disastrous for the ecologically sensitive Western Ghats as the proposed project was deep inside the forest.
Karnataka had petitioned the tribunal seeking release of 7.56 tmcft of water for Kalasa-Banduri Nala project. The tribunal, which gave its interim order after hearing arguments from both Karnataka and Goa, had rejected the state’s plea citing various grounds including ecological damage that the project may cause.

Get real on Swachh: Madras HC

Why is in news?

Despite the most stringent penal provisions in the law against manual scavenging, it continues in parts of India. The recent order of the Madras High Court asking the Centre and the Tamil Nadu government to ensure the strict enforcement of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 points to the malaise.

Why manual scavenging still persists?

- Manual scavenging persists mainly because of the continued presence of insanitary latrines, of which there are about 2.6 million that require cleaning by hand.
- In spite of a legal obligation to do so, State governments are not keen to demolish and rebuild old facilities lacking sanitation, or conduct a full census of both the latrines and the people engaged in clearing such waste.
- Many communities still regard the inclusion of a sanitary toilet as ritual and physical pollution of the house, and even the less conservative are ready to accept only large, expensive and unscientific structures much bigger than those recommended by the WHO.
- More pernicious is the entrenched belief in the caste system, that assumes Dalits will readily perform the stigmatised task of emptying latrines. Clearly, the law on punishment exists only on paper.
- The Central government, which directly runs the self-employment scheme for the rehabilitation of these workers, has also reduced funds from Rs. 448 crore in the 2014-15 budget to Rs. 5 crore this year. High allocation in the past has not meant substantial or effective utilisation.

What needs to be done?

- A determined approach to end the scourge requires a campaign against social prejudice that impedes solutions. Change now depends on the willingness of the courts to fix responsibility on State governments, and order an accurate survey of the practice especially in those States that claim to have no insanitary latrines or manual scavenging.
- Raising the confidence level among those engaged in manual cleaning is vital; even official data show their reluctance to take up self-employment.
- Empowerment holds the key to change, but that would depend on breaking caste barriers through education and economic uplift.
- Compensation sanctioned should be paid immediately; only a fraction of those with verified claims have received it.

The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013:

- The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, makes it clear that no person, local authority or any agency shall, from such date as the state government may notify, which shall not be later than one year from the date of commencement of this Act, engage or employ, either directly or indirectly, any person for hazardous cleaning of a sewer or a septic tank.
- The Act also says that any contract or agreement entered into before the commencement of the Act for engaging or employing a person for manual scavenging shall on the date of commencement of the Act be terminated and no compensation shall be payable.
Minister of State (I/C) for Petroleum and Natural Gas, Shri Dharmendra Pradhan recently chaired the first meeting of apex body for policy formulation and implementation of ‘Roadmap to achieve target of 10 % reduction in import dependency in oil and gas by 2021-22 under an institutional mechanism ‘Integrated Monitoring and Advisory Council’ (IMAC).

IMAC was envisaged to facilitate better coordination and comprehensive strategy for all energy resources by focusing on supply and demand side management. IMAC is consisted of Secretary, Petroleum & Natural Gas and other Senior Officers from various Ministries such as Ministry of New and Renewable Energy, Urban Development, Road and Transport, Agriculture, Power/Bureau of Energy Efficiency, Rural Development, Finance, Petroleum Planning Analysis Cell, PCRA, DGH etc.

**Key Highlights of 1st IMAC meeting**

- Ministry of Petroleum & Natural Gas highlighted major policy initiatives undertaken in recent past to enhance domestic production of oil and gas. It includes measures like resource re-assessment, Open Acreage Licensing Policy (OALP), National Data Repository (NDR), Hydrocarbon Exploration Licensing Policy (HELP), Discovered Small Field Policy, tapping unconventional sources such as Shale Gas and Coal Bed Methane (CBM), enhancing production of bio-diesel and increased use of PNG and LPG.
- Officials of other ministries also explained policies, schemes and projects taken towards augmenting the supply of energy, energy saving and demand substitution/reduction through alternate modes. Ministry of Road, Transport and Highway highlighted measures undertaken such as e-tolling to cut waiting time at toll plazas and notification of fuel efficiency norms for LCV. Ministry of Rural Development stressed upon its bio-fuel scheme for rural sector.
- Ministry of New and Renewable Energy (MNRE) elaborated on energy generation through renewable sources such as solar and wind power and their future strategy in this regard. Bureau of Energy Efficiency (BEE) pointed out measures for industrial and transport sectors.
- It stressed on the importance of concerted and coordinated efforts for promoting conservation and energy efficiency, exploring opportunities for oil demand substitution and tapping the potential of bio-fuels in more aggressive and synchronised manner.

**Gujarat retains top slot of states with most investment potential**

- Gujarat has retained the top position in the list of 21 states and UTs with most investment potential, according to a report by economic think-tank NCAER.
- The ranking of 20 states and one Union Territory of Delhi was based on six pillars — labour, infrastructure, economic climate, governance and political stability, perceptions and land — and 51 sub-indicators.
- Gujarat is followed by Delhi, Andhra Pradesh, Haryana, Telangana, Tamil Nadu, Kerala, Maharashtra, Karnataka and Madhya Pradesh. While Gujarat topped in economic climate and perceptions, Delhi ranked one in infrastructure. While Tamil Nadu topped the chart in labour issues, Madhya Pradesh ranked one in land pillar.

**Aajeevika Grameen Express Yojana**

The Ministry of Rural Development is all set to launch a new sub-scheme under Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM) which will be named as “Aajeevika Grameen Express Yojana (AGEY)”,

**About AGEY?**

- The main objectives of AGEY are to provide an alternative source of livelihoods to members of Self Help Groups (SHGs) under DAY-NRLM by facilitating them to operate public transport services in backward rural areas.
- This will provide safe, affordable and community monitored rural transport services like e-rickshaws, 3 and 4 wheeler motorised transport vehicles to connect remote villages with key services and amenities including access to markets, education and health for the overall economic development of the area.

**Implementation:**

- The sub-scheme will be implemented in 250 blocks in the country on a pilot basis for a period of 3 years from 2017-18 to 2019-20. The States have been informed about the number of blocks allocated to them to take up this sub-scheme in the pilot phases.
- One of the options proposed to be given under the sub-scheme is that the Community Based Organisation (CBO) will provide interest free loan from its own corpus to Self Help Group member for purchase of the vehicle.

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Parliament passes Collection of Statistics (Amendment) Bill, 2017

The parliament has passed The Collection of Statistics (Amendment) Bill, 2017 after it was approved by the Rajya Sabha. The Lok Sabha has passed it earlier.

The bill aims at amending the Collection of Statistics Bill, 2008, which facilitates the collection of statistics related to social, economic, demographic, scientific and environmental aspects, by central, state and local governments. It also allows the appointment of statistics officers to collect information and contains provisions to ensure security of information.

Salient features of bill

Jurisdiction of the 2008 Act: The Bill extends jurisdiction of the parent act to the state Jammu and Kashmir for the collection of statistics pertaining to subjects under the Union (List-I) or the Concurrent list (List-II) of the Constitution. These subjects include citizenship, banking, education, labour and forests as applicable to J&K.

Nodal officer: It adds provisions for the appointment of a nodal officer by the Union or state government. The function of nodal officer is to coordinate and supervise statistical activities under the government which has appointed him. Further, the Union government can also determine the powers and duties of the nodal officer.

Use of information: The Bill removes provision from parent act dealing with information collected under it only is used for statistical purposes. It also allows the Union government to determine the manner in which such information collected will be used for statistical purposes.

Think beyond loan waivers

Why is in news?
Recently a few States like Uttar Pradesh, Maharashtra, Punjab and Karnataka have responded to farm distress by rolling out farm loan waiver schemes as a measure of immediate relief to those farmers who qualify certain criteria. The demand for such measures is spreading to other States too. The ultimate goal of farm loan waiver is to lessen the debt burden of distressed and vulnerable farmers and help them qualify for fresh loans. The success of the loan waiver lies on the extent to which the benefits reach the needy farmers.

Drawbacks of loan waivers:

- Firstly, it covers only a tiny fraction of farmers. The loan waiver as a concept excludes most of the farm households in dire need of relief and includes some who do not deserve such relief on economic grounds.
- Second, it provides only a partial relief to the indebted farmers as about half of the institutional borrowing of a cultivator is for non-farm purposes.
- Third, in many cases, one household has multiple loans either from different sources or in the name of different family members, which entitles it to multiple loan waiving.
- Fourth, loan waiving excludes agricultural labourers who are even weaker than cultivators in bearing the consequences of economic distress. Fifth, it severely erodes the credit culture, with dire long-run consequences to the banking business.
- Sixth, the scheme is prone to serious exclusion and inclusion errors, as evidenced by the Comptroller and Auditor General’s (CAG) findings in the Agricultural Debt Waiver and Debt Relief Scheme, 2008.
- Lastly, schemes have serious implications for other developmental expenditure, having a much larger multiplier effect on the economy.
What needs to be done?

- **Proper identification**: For providing immediate relief to the needy farmers, a more inclusive alternative approach is to identify the vulnerable farmers based on certain criteria and give an equal amount as financial relief to the vulnerable and distressed families.
- **Enhance non-farm income**: The sustainable solution to indebtedness and agrarian distress is to raise income from agricultural activities and enhance access to non-farm sources of income. The low scale of farms necessitates that some cultivators move from agriculture to non-farm jobs.
- **Improved technology, expansion of irrigation coverage**, and crop diversification towards high-value crops are appropriate measures for raising productivity and farmers’ income. All these require more public funding and support.
- Another major source of increase in farmers’ income is remunerative prices for farm produce. This requires removal of old regulations and restrictions on agriculture to enable creation of a liberalised environment for investment, trading and marketing.
- Agrarian distress and farmers’ income will be addressed much better if States undertake and sincerely implement long-pending reforms in the agriculture sector with urgency.

Way ahead:
It appears that loan waiving can provide a short-term relief to a limited section of farmers; it has a meagre chance of bringing farmers out of the vicious cycle of indebtedness. There is no concrete evidence on reduction in agrarian distress following the first spell of all-India farm loan waiver in 2008. In the longer run, strengthening the repayment capacity of the farmers by improving and stabilising their income is the only way to keep them out of distress.

**BharatNet deadline pushed to March 2019**

**Why is in news?**
The Union Cabinet has approved the second phase of the BharatNet project that forms the backbone for the government’s Digital India initiative. The deadline for the delay-marred project has been pushed to March 2019.

**Background:**
The Centre is still working on completing the first phase of the BharatNet project for which the deadline was March 2017. It had been able to lay optical fibre in nearly one-lakh GPs, however, only about 22,000 GPs have been provided Internet connectivity due to equipment procurement issues. The second phase aims at covering the remaining 1.50 lakh GPs.

**BharatNet project:**
Bharat Net sought to connect all of India’s households, particularly in rural areas, through broadband by 2017, forming the backbone of the government’s ambitious Digital India programme. It proposes broadband connectivity to households under village panchayats and even to government institutions at district level. The project is being funded through the Universal Service Obligation Fund (USOF).

**Centre seeks debate in SC on J&K special status**

**Why is in news?**
The Centre has asked the Supreme Court to debate on the special status granted to the State of Jammu and Kashmir, saying it was both a sensitive and constitutional matter. The court agreed to schedule the case before a three-judge Bench.
Background:

The centre’s response came on a PIL plea filed by a Delhi based NGO, We the Citizens, contending that the J&K government, given the State’s special autonomous status under Articles 35A and 370, was discriminatory against non-residents as far as government jobs and real estate purchases were concerned.

J&K High Court ruling:

Jammu and Kashmir High Court had previously ruled that Article 370 assumed a place of permanence in the Constitution and the feature was beyond amendment, repeal or abrogation. The court said Article 35A gave “protection” to existing laws in force in the State.

✓ It also observed that the President under Article 370 (1) was conferred with power to extend any provision of the Constitution to the State with such “exceptions and modifications” as may be deemed fit subject to consultation or concurrence with the State government. The High Court said J&K, while acceding to the Dominion of India, retained limited sovereignty and did not merge with it.

What is Article 370?

- Article 370 of the Indian Constitution is a ‘temporary provision’ which grants special autonomous status to Jammu & Kashmir.

- Under Part XXI of the Constitution of India, which deals with “Temporary, Transitional and Special provisions”, the state of Jammu & Kashmir has been accorded special status under Article 370.

- All the provisions of the Constitution which are applicable to other states are not applicable to J&K.

Important provisions under the article:

1. According to this article, except for defence, foreign affairs, finance and communications, Parliament needs the state government’s concurrence for applying all other laws.
2. Thus the state’s residents live under a separate set of laws, including those related to citizenship, ownership of property, and fundamental rights, as compared to other Indians.
3. Indian citizens from other states cannot purchase land or property in Jammu & Kashmir.
4. Under Article 370, the Centre has no power to declare financial emergency under Article 360 in the state.
5. It can declare emergency in the state only in case of war or external aggression.
6. The Union government can therefore not declare emergency on grounds of internal disturbance or imminent danger unless it is made at the request or with the concurrence of the state government.
7. Under Article 370 the Indian Parliament cannot increase or reduce the borders of the state.

India’s first solar-powered 1600 HP DEMU train launched

Indian Railways has launched the country’s first solar-powered local train with a battery bank facility that ensures sufficient power even in the absence of sunlight. The entire electrical need of the coaches, which includes lights, fans and information display system, will be met by the energy produced by solar panels fitted atop the coaches of the DEMU (diesel electric multiple unit) train. The train was launched from Safdarjung railway station.
Ram Nath Kovind elected as the 14th President of India

Former Bihar governor Ram Nath Kovind is the 14th President of India. He won with over 7 lakh votes against Opposition candidate Meira Kumar.

Who elects the president?

Article 54 of the Indian Constitution lays the guidelines about voters in a Presidential election. It says, “Election of President The President shall be elected by the members of an electoral college consisting of the elected members of both Houses of Parliament; and the elected members of the Legislative Assemblies of the States.”

Who can’t vote?

The nominated members of Parliament, Legislative Assemblies, and members of Legislative Council don’t vote in the Presidential election.

Who is eligible to run for the President?

- A person who is 35 years of age. An Indian National.
- Must have a support of 50 MPs/MLAs (these can’t be nominated members). Must deposit Rs 15,000 as a security amount with the Reserve Bank of India (RBI).
- Must not hold any Office of Profit. (Any Constitutional position, which may further give rise to a conflict of interests in discharging of duties).

Voting Pattern:

Article 55 of Indian Constitution lays the guidelines about the way Indian President is to be elected. It says, “The election of the President shall be held in accordance with the system of proportional representation by means of the single transferable vote and the voting at such election shall be by secret ballot.”

Other key facts:

Secret Vote: Unlike the voting for any Bill or any motion in Parliament or state Assembly, secret voting is done to elect the President (Nobody can ever come to know who voted for whom).

Parties can’t issue a whip to their members: Since the Presidential election is intended to be free and fair, and representatives are supposed to exercise their free will, political parties are not allowed to issue a whip to their members for voting.

Vote value: Vote of each MP and MLA carries a certain value. In the case of MLAs, the value is calculated by dividing total population of the state by the number of elected members to the Legislative Assembly, further divided by 1000. As of now, the value of each MLAs vote is fixed. The population data is taken from the 1971 Census. In the case of an MP, the vote value is decided by dividing the total value of votes of all MLAs of the whole country, divided by the total number of elected MPs in Lower House (Lok Sabha) and Rajya Sabha (Upper House). At present, the vote value of each MP is fixed at 708.

Voting System: Unlike the conventional ballot voting, where the voter polls only for a single candidate of his choice, the lawmakers mark their preferences in the Presidential election. It is mandatory for every lawmaker to mark his first preference, otherwise the vote is deemed invalid. He or she, however, can leave other preferences vacant.

Unlike the general election counting, where an MP or an MLA is elected through ‘first past the post’ system, the winner in Presidential election is declared on the basis of a quote which is obtained by dividing the total number of valid votes by 2, and adding 1 to quotient (total number of valid votes/2+1).
Why is in news?
The Prime Minister Narendra Modi inaugurated Textiles India 2017, India’s first ever mega textiles trade fair at Gandhinagar, Gujarat. The three-day fair will showcase the nation as a global sourcing hub and investment destination for manufacturers world-wide.

Key Facts:
- The fair has been organised by Union Ministry of Textiles.
- It aims to explore opportunities and strengths of textiles and apparel manufacturing in India for global investors, and forge collaboration with global players in the textiles segment.
- The event will have G2G, B2B and B2G meetings with 2,500 international buyers, 1000+ international and domestic exhibitors and 15,000 domestic visitors.
- Besides, country sessions, state sessions, round tables and sectorial seminars will be also held, many of which will be chaired by Union Ministers. Fashion shows and thematic shows will also be held.

Parliament passes The Admiralty (Jurisdiction and Settlement of Maritime Claims) Bill, 2016

- Parliament has passed The Admiralty (Jurisdiction and Settlement of Maritime Claims) Bill, 2016. Admiralty laws deal with cases of accidents in navigable waters or involve contracts related to commerce on such waters.
- The Bill seeks to upgrade existing laws related to civil matters of admiralty jurisdiction of courts, maritime claims, arrest and detention of ships. It repeals laws such as the Admiralty Court Act, 1861, Colonial Courts of Admiralty Act, 1890.

Features of the Bill
- The bill confers admiralty jurisdiction on High Courts located in coastal states of India, thus extending their up to territorial waters. It empowers central government to extend the jurisdiction of these High Courts. Under the earlier laws enacted during the colonial era, the admiralty was only by the High Courts of Bombay, Calcutta and Madras.
- The bill now extends the provisions of admiralty jurisdiction to every vessel irrespective of place of domicile or residence of owner. It does not apply to naval auxiliary, warships and vessels used for non-commercial purposes.
- It empowers High Courts to exercise jurisdiction on maritime claims arising out of conditions such as disputes regarding ownership of a vessel, mortgage on a vessel, construction, repair, or conversion of the vessel, disputes between co-owners of a vessel regarding employment or earnings of the vessel, disputes arising out of the sale of a vessel, and environmental damage caused by the vessel, etc.

Background: India is a leading maritime nation and maritime transportation caters to about 95% of its merchandise trade volume. However, the admiralty jurisdiction of Indian courts under the present statutory framework flow from laws enacted in the British era. The repealing of five archaic admiralty statutes is in line with the Union Government’s commitment to do away with archaic laws which are hindering efficient governance.

Foundation Stone of country’s biggest Global Skill Park laid in Bhopal

Why is in news?
The foundation stone of the country’s biggest Global Skill Park was laid in Bhopal jointly by Union Minister of State for Skill Development and Entrepreneurship Rajeev Pratap Rudi and Madhya Pradesh Chief Minister Shivraj Singh Chouhan.

About Global Skill Park
- Prepare skilled youths for jobs in private companies
- Get employment opportunities in foreign countries.
- ‘With Industry -For Industry’.
- Capacity to train 1000 students every year
- Provision of international joint certification courses.
The park will come up on 37 acre land allotted in Narela Shankari area of Bhopal. It will be established with the support of Singapore’s Institute of Technical Education and Education Services (ITEES).

Steps taken by state to ensure that students get quality technical education Emphasis on quality technical education and publicity of professional education

Lok Sabha passes The Right of Children to Free and Compulsory Education (Amendment) Bill, 2017

The Lok Sabha has passed The Right of Children to Free and Compulsory Education (Amendment) Bill, 2017. The Bill amends the Right of Children to Free and Compulsory Education Act (RTE), 2009 to extend the deadline for teachers to acquire the prescribed minimum qualifications for appointment.

Through the amending measure inadequately qualified teachers as on March 31, 2015, working after enactment of the RTE Act, 2009 are being given last chance to acquire minimum qualifications within a period of four years i.e. by March 31, 2019 to hold their jobs as teachers.

Key Facts

- The amendments to RTE Act, 2009 will enable the in-service untrained elementary teachers to complete their training and ensure that all teachers at the elementary level have certain minimum standard of qualifications.
- It will ensure that all teachers attain minimum qualifications as considered necessary to maintain the standard of teaching quality.
- It will ultimately result in improvement in overall quality of teachers, teaching processes and learning outcomes of children.
- It will reinforce Government’s emphasis on improvement of quality of elementary education.

Island development- Islands Development Agency (IDA)

Ten islands from Andaman and Nicobar and Lakshadweep have been identified by the government for improving maritime economy, preserving the eco-system and addressing security concerns. The decision was taken at the first meeting of the newly-constituted Islands Development Agency (IDA). The islands include Smith, Ross, Aves, Long and Little Andaman in Andaman and Nicobar and Minicoy, Bangaram, Suheli, Cherium and Tinnakara in Lakshadweep.

Islands Development Agency (IDA):
The IDA was set up on June 1 this year following Prime Minister Narendra Modi’s review meeting for the development of islands. The meetings of the agency are chaired by the Union Home Minister. Members of the IDA include cabinet secretary, home secretary, secretary (environment, forests and climate change), secretary (tourism) and secretary (tribal welfare).
Supreme Court allows Centre to replace MCI oversight committee

- The Supreme Court has allowed the Union Government to replace the oversight committee set up to supervise the functioning of the Medical Council of India (MCI) with a fresh panel of five eminent doctors. The Supreme Court also gave the Government liberty to replace any doctor in the list with another if he does not wish to be a part of the oversight committee.
- Earlier, Government had proposed the names of five eminent doctors to replace the earlier members of the oversight committee whose term had just expired.

**Background:**
The Supreme Court using its rare and extraordinary powers under the Article 142 of the Constitution had set up the oversight committee court in May 2016 to oversee the MCI’s functioning for a period of one year or till a suitable mechanism was brought in by the Government to substitute it. The committee was led by former Chief Justice of India R.M. Lodha.

The MCI was established in 1934 under the Indian Medical Council Act, 1933, as an elected body for maintaining the medical register and providing ethical oversight, with no specific role in medical education.

The Amendment of 1956, however, mandated the MCI “to maintain uniform standards of medical education, both under graduate and postgraduate; recommend for recognition/de-recognition of medical qualifications of medical institutions of India or foreign countries; accord permanent registration/provisional registration of doctors with recognised medical qualifications; and ensure reciprocity with foreign countries in the matter of mutual recognition of medical qualifications.”

The second amendment came in 1993, at a time when there was a new-found enthusiasm for private colleges. Under this amendment, the role of the MCI was reduced to an advisory body with the three critical functions of sanctioning medical colleges, approving the student intake, and approving any expansion of the intake capacity requiring prior approval of the Ministry of Health and Family Welfare.

Lok Sabha passes Indian Institutes of Management Bill, 2017

- The Lok Sabha passed the Indian Institutes of Management (IIM) Bill, 2017 by voice vote. The Bill declares the IIMs as institutions of national importance.
- The bill seeks to empower these institutions to attain standards of global excellence in management, management research and allied areas of knowledge. It also promises to grant administrative, academic and financial autonomy to these B-Schools and allow them to grant degrees.

**Key Highlights of Bill**

- The bill allows IIMs to grant degrees to their students. It also grants them complete autonomy, combined with adequate accountability. It establishes coordination Forum of IIMs as an advisory body.
- It empowers board of an IIM to drive the management of the institution. It will select Chairperson and Director of IIM.
- The board will have greater participation of experts and alumni. It will also include women and members from Scheduled Castes/Tribes.
- Besides, it adds provisions for periodic review of the performance of IIM by independent agencies and their results will be placed in public domain.
- Besides, it also has provision to place the Annual Report of the IIMs in the Parliament and CAG (Comptroller and auditor general of India) auditing their accounts.

**Background**
IIMs are the country’s premier institutions imparting best quality education in management and are recognized as world-class management Institutions and Centres of Excellence. India has 20 IIMs now. All IIMs are separate autonomous bodies registered under the Societies Act. Earlier they were not authorized to award degrees. These awards were treated as equivalent to MBAs and Ph.D, respectively, but their equivalence was not universally acceptable, especially for the Fellow Programme.

E-commerce: RCEP nations talk details
Sixteen Asia Pacific nations, including India, are discussing in detail norms on e-commerce as part of negotiations on the proposed mega Free Trade Agreement known as the Regional Comprehensive Economic Partnership (RCEP).

Issues including digital certification, paperless trading, online consumer protection and customs duties in ecommerce have been identified for discussion. The discussions follow the setting up of a panel on e-commerce two years ago by RCEP countries in response to a Japanese proposal on easing foreign direct investment in the sector under which member countries would exchange best practices linked to online commerce.

**Background:**
Many RCEP nations including Australia, Japan and China, are pushing for inclusion of a host of elements for ‘Terms Of Reference’ for RCEP negotiations concerning e-commerce. This is with a view to have some binding commitments from the RCEP members on liberalising e-commerce and ensure that the final pact has a separate chapter on e-commerce.

**India’s position:**
India has been opposing binding norms on opening up the e-commerce sector at the level of RCEP as well as the global level (WTO) talks on grounds including that it (India) is yet to have a comprehensive national policy on the topic. It is also believed that such binding norms would harm development by diminishing policy space, some economists have warned. Also, experts fear RCEP talks could be used by developed countries to get an outcome at the WTO ministerial in Argentina later this year.

**RCEP is proposed between the ten member states of the Association of Southeast Asian Nations (ASEAN) (Brunei, Burma (Myanmar), Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, Vietnam) and the six states with which ASEAN has existing FTAs (Australia, China, India, Japan, South Korea and New Zealand).**

**RCEP negotiations were formally launched in November 2012 at the ASEAN Summit in Cambodia. RCEP is viewed as an alternative to the TPP trade agreement, which includes the United States but excludes China.**

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**NITI Aayog clears six proposals for high-tech public transport**

- Niti Aayog has cleared proposals of the transport ministry exploring options to improve public transport. These proposals include mass rapid transportation technologies such as **hyperloop, metrino and pod taxis.**
- Following the go-ahead, the transport ministry has formed a six member committee, headed by a former top official of Railways, to study safety parameters associated with these technologies and global practices.

**Significance:**
These new technologies are path breaking and can alter the way of intercity travel in the country. The new technologies are being explored as current public transportation is unable to resolve the increasing traffic crisis in the country. Besides, some of them are more **cost effective** than the existing ones.

**Metrino:** Fully automatic, driverless small pods travel independently suspended over an overhead network which is usually 5-10 meters above the ground.

**Podtaxi:** Small automated vehicles/podcars/cable cars which carry a small number of passengers. The ropeway-like system runs on electricity and driverless pods and comes down at designated stations, thus removing the traffic burden from crowded roads.

**Hyperloop:** A hyperloop comprises a sealed tube or series of tubes through which a pod may travel free of air resistance or friction conveying people or objects at speeds matching that of an aircraft.
Sexual Harassment electronic-Box (SHe-Box)

Why is in news?

It is an online complaint management system for registering complaints related to sexual harassment at workplace. It was launched by the Ministry of Women and Child Development. The complaint management system has been developed to ensure the effective implementation of Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (the SH Act), 2013.

- This portal is an initiative to provide a platform to women working or visiting any office of Central Government (Central Ministries, Departments, Public Sector Undertakings, Autonomous Bodies and Institutions etc.) to file complaints related to sexual harassment at workplace under the SH Act.
- Those who had already filed a written complaint with the concerned Internal Complaint Committee (ICC) constituted under the SH Act are also eligible to file their complaint through this portal.
- It is also an effort to provide speedier remedy to women facing sexual harassment at workplace as envisaged under the SH Act.
- Once a complaint is submitted to the portal, it will be directly sent to the ICC of the concerned Ministry/Department/PSU/Autonomous Body etc. having jurisdiction to inquire into the complaint. Through this portal, WCD as well as complainant can monitor the progress of inquiry conducted by the ICC.

The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 seeks to protect women from sexual harassment at their place of work.

This statute superseded the Vishakha Guidelines for prevention of sexual harassment introduced by the Supreme Court of India.

Under the Act, which also covers students in schools and colleges as well as patients in hospitals, employers and local authorities will have to set up grievance committees to investigate all complaints. Employers who fail to comply will be punished with a fine of up to 50,000 rupees.

SC for panels to examine dowry cases

In a landmark judgment, aimed at putting an end to misuse of section 498A of the IPC that is dowry-related offences, the Supreme Court has proposed a slew of measures. They aim to put an end to the automatic arrest of the husband and his family members.

Proposed measures:

- Special committees:
  Every complaint under Section 498A should henceforth will have to be referred to Family Welfare Committees – to be constituted at every district. No arrest shall be effected till report of such committee is received.
- Enquiry:
  The committee would interact with the parties personally or by means of telephonic or electronic communication and give a report within a month to the authority which referred the complaint to it. There will be no routine impounding of passports or issuance of Red Corner Notice for NRI accused. Personal appearance of all family members and particularly outstation members may not be required. However, these directions will not apply to the offences involving tangible physical injuries.
- Report:
  The report would be on “the factual aspects and its opinion” in the matter. Till report of the committee is received, no arrest should normally be effected. The report may be then considered by the investigating officer or the magistrate on its own merit.
- Investigating officers:
  Complaints under Section 498A and other connected offences may be investigated only by a designated investigating officer of the area. Such designations should be made within one month. Such designated officers may be given training for not less than a week or as may be considered appropriate. The training has to be completed within four months.
- Bail:
  If a bail application is filed with at least one clear day’s notice to the Public Prosecutor/complainant, it should be decided as far as possible on the same day.
Significance of this move:
This is a shift from the dominant judicial conception of women as victims who would silently suffer injustice rather than bring disrepute to their family by taking domestic conflict outside the four walls of the home. Going by the popular portrait, it is only the worst victim of abuse among women who approach the court for redress. With its latest observations, the court broke away from the reigning perception to rule that in dowry cases, the account of the alleged victim need not be taken at face value.

Charging Stations for Electric Vehicles Installed in Bengaluru

Under Faster Adoption and Manufacturing of (Hybrid & Electric) Vehicles in India [FAME-India] Scheme of the Government, **25 Charging Stations have been installed** at 6 different locations in Bengaluru by M/s. Mahindra REVA Electric Vehicles Pvt. Ltd, as a pilot project. Based on the proposals received under FAME Scheme, charging infrastructure in selected cities/locations were sanctioned by the Department of Heavy Industries.

**FAME India scheme:**
- The FAME-India (Faster Adoption and Manufacturing of (hybrid & Electric vehicles in India) scheme is proposed to be implemented over a period of 6 years, till 2020, wherein it is intended to support the hybrid/electric vehicles market development and its manufacturing eco-system to achieve self-sustenance at the end of the stipulated period.
- The scheme has four focus areas, technology development, demand creation, pilot projects and charging infrastructure.
- FAME India – Faster Adoption and Manufacturing of Hybrid and Electric vehicles in India – is a part of the National Electric Mobility Mission Plan.
- The scheme envisages Rs 795 crore support in the first two fiscals starting with the current year.
- It is being administered by the Heavy Industries Ministry.

SC ready to revisit Lodha reforms

The Supreme Court is all set to revisit, if not modify, some key recommendations Justice R.M. Lodha Committee to usher in transparency in the Board of Control for Cricket in India (BCCI) and the cricket administration.

**Background:**
Following allegations of corruption, match fixing and betting scandals in cricket in the country, the Supreme Court of India appointed a three-panel member led by Justice R M Lodha in January 2015 to look into the functioning of BCCI and suggest reforms. The Lodha Committee, in January 2016, released its list of reforms which had some major contentious points. The reforms were contested by several BCCI post holders.

**Contentious proposals:**
- The possibility of one state, one vote became the biggest point of debate among several others;
- restriction on ministers and civil servants
- Those above 70 from becoming its members and cooling off period were some other major contentions.
Lodha panel also suggested the setting up of a players’ association in the country. The recommendations focused mainly on BCCI administrative structures and not on its cricketing functions.

What next?
The Court has said that it would hear the BCCI, the State cricket associations and member bodies on issues such as “memberships, number of votes” in an effort to make the running of “cricket, the gentleman’s game” come as close to perfect as possible. Meanwhile, the court has exhorted the BCCI and its members to implement the Lodha reforms as regards all issues other than the ones flagged for further debate in court.

Key recommendations accepted by the BCCI:
1. The induction of the representative of the Comptroller and Auditor General as the member of the Apex Council and the IPL Governing Council.
2. The formation of the Apex Council – to replace the working committee, according to the Lodha report – with certain modifications.
3. The Lodha report had recommended that only the BCCI president, vice-president, secretary, joint secretary and treasurer be part of the Apex Council but it is understood that the board was in favour of all the members of the working committee remaining a part of the Apex Council.
4. Putting in place various committees as recommended by the Lodha Committee, including the special committee for the differently abled and the women’s committee.
5. The formation of the Players Association.
6. Voting rights for the Associate members as per the ICC guidelines.
7. Puducherry (Pondicherry) to be granted associate membership in the BCCI

Aarambh app for Road maintenance

The Union Ministry of Rural Development has launched a mobile app - Aarambh- for road maintenance.
- This Mobile Phone App aims at use of GIS based mapping for making road inventories, condition surveys, and producing cost estimates and other relevant data for preparation and monitoring of annual road maintenance plans.
- Its usage would greatly enhance the service delivery of the state level institutions in planning and implementing performance based rural roads maintenance contracts.

States can’t enact law on parliamentary secretaries: SC

The Supreme Court has ruled that state assemblies hold no power to enact a law that enables them to appoint parliamentary secretaries.

Background:
The ruling came on a plea challenging the appointment of 13 MLAs as parliamentary secretaries by the Assam government in 2015. The verdict would also have an impact on the Aam Aadmi Party government’s decision to appoint 21 MLAs as parliamentary secretaries. The Delhi High Court too had quashed their appointments, saying ‘it lacked the approval of the lieutenant governor’.

What’s the issue?
The question posed before the court was whether Article 194(3) and Entry 39 of List II of the 7th Schedule authorised the state legislature to make the impugned Act. Entry 39 indicates the field of legislation regarding the powers, privileges, and immunities of the house of legislatures.

Who is a parliamentary secretary?
A Parliament Secretary is similar to a Minister of State who assists a Minister in his or her duties.

What is the controversy over the 21 AAP MLAs who were appointed Parliamentary Secretaries to Ministers of the Delhi government?
It raises two issues.

**Office of profit:** First, the Constitution specifies conditions which disqualify MPs, MLAs, Municipality and Panchayat members from membership of their respective institutions. The first is holding an “Office of Profit” under the state or central government. The essence of this disqualification is that there should be no conflict between the duties and interests of an elected member. MPs and MLAs hold the government accountable for its work, and if they held an “Office of Profit” under the government, they might be susceptible to government influence and might not discharge their constitutional mandate fully.

**Cap:** Second, the Constitution caps the number of members in the union and state cabinet. Article 164(1A) specifies that the number of ministers including the Chief Minister has to be within 15% of the total number of members of the Assembly. (10% in the case of Delhi, which is not a ‘full’ state) Over the last few years, courts across the country have struck down the appointment of Parliamentary Secretaries for violating the Constitution.

### Union Cabinet clears minimum wage code bill

The Union Cabinet has approved the new wage code bill which will ensure a minimum wage across all sectors by integrating four labour related laws. The proposed legislation is expected to benefit over 4 crore employees across the country. **Labour is on the concurrent list.**

#### Highlights of the Bill:

- The Labour Code on Wages Bill will consolidate the Minimum Wages Act, 1948; the Payment of Wages Act, 1936; the Payment of Bonus Act, 1965; and the Equal Remuneration Act, 1976. The bill seeks to empower the Centre to set a minimum wage across all sectors in the country and states will have to maintain that.
- However, states will be able to provide for higher minimum wage in their jurisdiction than fixed by the central government.
- The new minimum wage norms would be applicable for all workers irrespective of their pay. At present, the minimum wages fixed by the Centre and states are applicable to workers getting up to Rs 18,000 pay monthly.
- This would ensure a universal minimum wage for all industries and workers, including those getting monthly pay higher than Rs 18,000.
- The minimum wage would be applicable on all classes of workers. At present, it is applicable for scheduled industries or establishments in the law.
- The wage code will empower the Centre to notify a ‘national minimum wage’ (below which no state can fix their minimum wages) and this will be revised every two years (five years if the dearness allowance becomes part of the minimum wages).

### Jiyo Parsi

#### Why is in news?

“Jiyo Parsi Publicity Phase-2” was recently launched by the government. The scheme aims to fulfil the objective of inclusive growth of the government.

#### Jiyo Parsi scheme:

- Declining population of Parsi community in India is a matter of concern. Therefore, “Jiyo Parsi Publicity Phase-1” was initiated in 2013 for containing the declining trend of population of the Parsi community and reverse it to bring their population above the threshold level.
- The main objective of the “Jiyo Parsi” scheme is to reverse the declining trend of Parsi population by adopting a scientific protocol and structured interventions, stabilize their population and increase the population of Parsis in India.
- Ministry of Minority Affairs’ scheme has two components: Medical Assistance and Advocacy/Counselling.

### Policy boosts care for blood disorders

The Union Health and Family Welfare Ministry’s recently released a policy on the Prevention and Control of haemoglobinopathies in India. With this, people living with thalassaemia, sickle cell anaemia and other haemoglobin disorders can now look forward to better screening and treatment.

#### Highlights of the policy:

- The policy aims at creating treatment protocol benchmarks, to improve the quality of life of patients.
It is also a guide on prevention and control, which includes antenatal and prenatal testing to reduce the incidence of live haemoglobin disorder births.

Using public health awareness programmes and education, it highlights various haemoglobinopathies.

The guidelines include the creation of a national registry to plan future patient services. The registry will also collect useful data, such as the location of patients to identify areas of high concentration, ethnicity or other characteristics, age distribution, records of deaths and their cause.

Supported by the National Health Mission, Blood Cell and the Rashtriya Bal Swasthya Karyakram, the guidelines provide for screening of pregnant women during antenatal check-up, pre-marital counselling at college level and onetime screening for variant anaemia in children.

**Background:**

Thalassaemia and sickle cell anaemia are the most frequently encountered ‘rare blood disorders’ in the country and impose a significant economic burden on families. They are caused by errors in the genes responsible for the production of hemoglobin, a substance composed of a protein (globin) plus an iron molecule (heme) that is responsible for carrying oxygen within the red blood cell. These disorders can cause fatigue, jaundice, and episodes of pain ranging from mild to very severe. They are inherited, and usually both parents must pass on an abnormal gene in order for a child to have the disease. When this happens, the resulting diseases are serious and, at times, fatal.

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**223 anti-dumping probes initiated by India**

- India has initiated as many as 223 anti-dumping investigations between January 2012 and July 14 this year against various countries, including China and Indonesia. During the period, **maximum number of cases were against China**.
- Product categories on which the levy was imposed include chemicals, fibre boards, glass & glassware, pharmaceuticals and steel.

**Anti-dumping duty:**

Anti-dumping is a measure to rectify the situation arising out of the dumping of goods and its trade distortive effect. The purpose of anti dumping duty is to rectify the trade distortive effect of dumping and re-establish fair trade. The use of anti dumping measure as an instrument of fair competition is permitted by the WTO. It provides relief to the domestic industry against the injury caused by dumping. It is levied on distrustfully low-priced imports, so as to protect the domestic manufacturers.

**Need for anti-dumping duty:**

Dumping is an unfair trade practice of exporting goods to another country at a price lesser than what is paid in the exporting nation or their normal production cost, thereby distorting international trade and causing injury to the domestic manufacturers of the goods in the importing country.
Petya ransomware

Why is in news?
Many organizations in Europe and the US have been crippled by a ransomware attack known as “Petya”. The malicious software has spread through large firms including the advertiser WPP, food company Mondelez, legal firm DLA Piper and Danish shipping and transport firm Maersk, leading to PCs and data being locked up and held for ransom. It had a major impact on the operations in India. Cyber security experts claim India’s critical infrastructure remains vulnerable to such attack even as the country’s largest container port – Jawaharlal Nehru Port Trust (JNPT) – has been affected, prompting authorities to contain the disruption in emergency mode.

What is Petya?
Petya is a family of encrypting ransomware that was first discovered in 2016. The malware targets Microsoft Windows-based systems, infecting the master boot record to execute a payload that encrypts a hard drive’s file system table and prevents Windows from booting.

- Petya relies on the same NSA-leaked EternalBlue exploit that was used by WannaCry, but that’s only one of its strategies to burrow itself across computers.
- Petya infects computers and locks down their hard drives. It demands a ransom of $300 (Rs 19,000) in Bitcoins. The email associated with the ransomware has been blocked, so even if victims pay, they won’t get their files back. Once it infects a computer, Petya waits for 10-60 minutes, and then reboots the computer. It then encrypts the master file table and then overwrites the master boot record with a custom loader. It places a ransom note to explain what users must do to regain control.

How is Petya different from WannaCry?
Unlike WannaCry, Petya does not encrypt individual files, but overwrites the master boot record and encrypts the master file table, thus rendering the system inoperable until the ransom has been paid.

What is ransomware?
A piece of malicious software which takes control of your system and files. Upon taking over, it applies encryption on those files and asks for money for a key that can restore the files. The ransomware often scrambles file names and changes their extension.

India to host 2017 Global Conference on Cyber Space

- India will host Global Conference on Cyber Space (GCCS) 2017, the world’s largest conference on cyber space and related issues in New Delhi in November 2017.
- This is for the first time GCCS is taking place outside Organisation for Economic Co-operation and Development (OECD) nations. It will be the fifth edition the conference.
- The theme for the GCCS 2017 is ‘Cyber4All: An Inclusive, Sustainable, Developmental, Safe and Secure Cyberspace’. The cyber security will be one of the major focus areas in GCCS 2017. It will serve as a platform for the exchange of ideas with global think thanks and promote closer co-operation among the international community.

Global Conference on Cyber Space (GCCS)
The GCCS is a prestigious international conference that aims at encouraging dialogue among stakeholders of cyberspace. It was incepted in 2011 in London. It brings together governments, private sector and civil society to discuss and promote practical cooperation in cyberspace, to discuss norms for responsible behaviour in cyberspace and to enhance cyber capacity building. The conference is built on the themes such as economic growth and development, social and cultural benefits, a safe and secure cyberspace, cybercrime and international security. It has helped in setting up rules and guidelines for the editions to follow.
Government mulls insurance cover for digital transaction frauds

The government is “very seriously” considering the recommendations of the Chandrababu Naidu committee on digital payment security, including insurance cover for the victims of fraudulent digital transactions.

Important recommendations made by the committee:

- The Committee of Chief Ministers on Digital Payment, chaired by Chief Minister of Andhra Pradesh N. Chandrababu Naidu, has in its interim report suggested several measures for digital payment security, including an insurance scheme to cover losses incurred in digital transactions on account of fraud, etc.
- The report suggests that in order to address the apprehension of the general public in adopting digital payments, the scheme should target low-ticket transactions to cover the vulnerable sections like small merchants, farmers etc.

Need for digital security:

- The number of digital transactions in the country was rising and hence the concern for their security.
- Around 1,200 crore digital transactions take place annually in the country. Of these, between 0.005% and 0.007% are fraudulent transactions.
- The number of cases of frauds involving credit cards, ATM/debit cards and Internet banking during 2015-16 was 16,468 and in 2016-17 it was 13,653.
- As per incidents reported to the Indian Computer Emergency Response Team (CERT-In), 40 phishing incidents affecting 19 financial organisations and 10 incidents affecting ATMs, Point of Sale (POS) systems and Unified Payment Interface (UPI) have been reported during November 2016 to June 2017.

Indian Army inks MoU with DRDO to raise MRSAM defence system regiment

The Indian Army has signed MoU (Memorandum of understanding) with Defence Research and Development Organisation (DRDO) to raise one regiment of the advanced Medium Range Surface to Air Missiles (MRSAM) defence system.

Background:
The Indian Army is planning to have a total of five regiments of MRSAM defence system, which will be deployed opposite to China and Pakistan. Each regiment consists of four launchers with three missiles each. So five regiments will have total 60 missiles. Earlier the Cabinet Committee on Security (CCS) headed by PM Narendra Modi had approved proposal for procuring MRSAM system for the army.

MRSAM:
The MRSAM is an advanced, all weather, mobile, land-based air defence system. It can shoot down enemy ballistic missiles, aircraft, helicopters, drones, surveillance aircraft and AWACS aircraft. It is capable of engaging multiple aerial targets at ranges of more than 50 km.

MRSAM is a land-based variant of the long-range surface-to-air missile (LRSAM) or Barak-8 naval air defence system, which is designed to operate from naval vessels. Each MRSAM system comprises a command-and-control system, mobile launchers, tracking radar and missiles.

The system will be jointly developed by Israel Aerospace Industries (IAI) and DRDO with the involvement of DPSUs and private sectors. It has majority indigenous content, giving boost to the Make-in-India initiative.

In July 2016, the IAI and DRDO successfully had conducted three flight tests of the MRSAM at the integrated test range off the Odisha Coast. The missile had successfully intercepted moving aerial targets in all three tests.
Rukmini keeps eye on dancing dragon at sea

With China increasing its naval presence in the Indian Ocean Region amid the ongoing Sikkim stand-off, the Indian Navy is keeping an eye on the ‘dragon’ with the help of its ‘eye in the sky’, GSAT-7 also called Rukmini, the Navy’s own dedicated military satellite that was launched in September 2013.

About Rukmini

It has helped the Navy monitor the Indian Ocean Region (IOR) as it has a nearly 2,000 nautical mile ‘footprint’. The multi-band communication-cum surveillance satellite, which is operating from the geo-stationary orbit (at 36,000km altitude), provides real-time inputs to naval warships, submarines and maritime aircraft and keep an eye on both Arabian Sea and Bay of Bengal but also helped the force increase its communication and surveillance capabilities from Persian Gulf to Malacca Strait, which together is equivalent to almost 70% of the IOR. With the help of this ‘eye in the sky’, the Army, too, gets vital inputs about over-the-land movements.

Flight Test of QRSAM

✓ Defence Research and Development Organisation (DRDO) developed Quick Reaction Surface to Air Missile (QRSAM) was recently successfully flight tested from ITR Chandipur, off the Odisha Coast.
✓ The QR-SAM weapon system has been jointly developed by the Defence Research and Development Organisation (DRDO) and Bharat Electronics Ltd.
✓ It is a quick reaction, all-weather, network-centric missile system capable of search-on-the-move.
✓ The missile system can also engage multiple targets within a range of around 30 km with two vehicle configuration for area air defence.
✓ It is a truck-mounted missile with a 360° rotatable, electro-mechanically operated, turret-based launch unit.
First Two NOPVs Shachi and Shruti Launched

Reliance Defence and Engineering Limited (RDEL) has launched the first two Naval Offshore Patrol Vessels (NOPVs) at their shipyard in Pipavav, Gujarat.

- The ships are part of a five ship project being constructed for the Indian Navy.
- The primary role of NOPVs is to undertake surveillance of the country’s vast Exclusive Economic Zone (EEZ) besides operational tasks such as anti-piracy patrols, fleet support operations, maritime security of offshore assets, coastal security operations, and protection of shipping lanes.
- The NOPVs would increase the ocean surveillance and patrolling capabilities of the Indian Navy.
- The NOPVs are patrol ships and are armed with 76mm Super Rapid Gun Mount (SRGM) system along with two 30mm AK-630M guns which provide medium range and short range offensive and defensive capabilities.
- The armament is remotely controlled through an electronic Fire Control System. The ships are fitted with diesel engine driven propulsion systems and can deliver speeds up to 25 knots.
- All ship operations are controlled by an intelligent Integrated Platform Management System which has interfaces for all operational activities onboard the ship.

Malabar 2017

Navies of India, US and the Japan Maritime Self-Defence Force have begun Malabar naval exercise 2017, aimed at achieving deeper military ties between the three nations. It is the 21st edition of the Malabar exercise. In this edition of the exercise, total of around 15 warships, two submarines and scores of fighter jets, surveillance aircraft and helicopters from three navies will take part.

Key Facts:

- The 8 day long Malabar 2017 exercise consists of both ashore and at-sea activities. This year operations of the exercise include anti-submarine warfare, familiarization with inter-operability between maritime forces, search and rescue and seizure missions and many other drills.
- One of the main goals of this edition of the exercise is “submarine-hunting”. The goal carries subtext given the ever-increasing and regular operation of Chinese Navy submarines in the Indian Ocean.
- This year, two aircraft carriers from India and US and a Japanese helicopter destroyer form part of the warships that will join the naval drills.
- Participants from US Navy include the Nimitz-class aircraft carrier USS Nimitz with embarked Carrier Air Wing 11; guided-missile cruiser USS Princeton; guided-missile destroyers USS Howard, USS Shoup and USS Kidd; a P-8A Poseidon surveillance aircraft; and a Los Angeles-class fast-attack submarine.
- From Indian Navy, aircraft carrier INS Vikramaditya is participating for the first time. Two Kamorta class anti-submarine warfare corvettes, two Shivalik class frigates and tanker INS Jyoti are also participating. The Japan Maritime Self Defence Force (JMSDF) ships JS Izumo and JS Sazanami are participating in the exercise.

The primary aim of this multilateral exercise is to increase interoperability amongst the three navies and develop common understanding of procedures for Maritime Security Operations and deepen defence relations. The exercise, would include professional exchanges on carrier strike group operations, maritime patrol and reconnaissance operations, surface and anti-submarine warfare. Medical operations, damage control, explosive ordinance disposal, helicopter operations and anti-submarine warfare would also take place.

In 2007, the exercise also saw participation of Australia and Singapore. All the participating nations in the exercise have clarified earlier that the Malabar series is not aimed at any specific country.
India’s first unmanned tank Muntra

India’s first unmanned tank developed by the Defence Research and Development Organisation (DRDO) has been rolled out of the Chennai lab.

- Muntra, the unmanned tank, has three variants – surveillance, mine detection and reconnaissance in areas with nuclear and bio threats. It is likely to be used in Naxal-hit areas.
- Muntra-S has been developed for unmanned surveillance missions, whereas Muntra-M is built for detecting mines. Muntra-N, on the other hand, will be deployed in areas where nuclear radiation or bio weapon risk is high. The vehicle has been tested.
- It’s surveillance radar, which has an integrated camera can be used to spy on ground target 15km away.

India-China Border Dispute

Why is in news?
China’s People’s Liberation Army (PLA) recently attempted to construct a road in the disputed Doklam region unilaterally. However, Bhutan had strongly opposed this.

Present situation:
- Indian and Chinese troops are facing off once again in Sikkim at Doko-La (or Donglong, as the Chinese call it), which lies at the tri-junction of India, China and Bhutan. There have been growing tensions between India and China. The current confrontation, however, shows signs of escalating. Both countries have upped the ante and deployed around 3,000 troops each in the tri-junction.
- The Doklam area has huge strategic significance for both India and China. It close to proximity of sensitive Chicken’s Neck, or the Siliguri Corridor, which is an extremely narrow stretch of land that connects the north-eastern region to the rest of India. Here is background of India-China Border dispute.

Age old India-China Border Dispute:
- India shares total boundary of around 3,488 km with China (second largest after Bangladesh). The Sino-Indian border is generally divided into three sectors namely: Western sector, Middle sector, and Eastern sector. 5 states viz. Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh share border with China.

Western Sector

- In the western sector, India shares about 2152 km long border with China. It is between Jammu and Kashmir and Xinjiang Province of China. In this sector, there is territorial dispute over Aksai Chin. Both countries went to war in 1962 over disputed territory of Aksai Chin. India claims it as part of Kashmir, while China claims it is part of Xinjiang.
- The dispute over Aksai Chin can be traced back to the failure of the British Empire to clearly demarcate a legal border between China and its Indian colony. During the time of British rule in India, two borders between India and China were proposed Johnson’s Line and McDonald Line.
- The Johnson’s line (proposed in 1865) shows Aksai Chin in Jammu and Kashmir i.e. under India’s control whereas McDonald Line (proposed in 1893) places it under China’s control. India considers Johnson Line as correct, rightful national border with China, while on the other hand, China considers the McDonald Line as the correct border with India.
- At present, Line of Actual Control (LAC) is the line separating Indian areas of Jammu and Kashmir from Aksai Chin. It is concurrent with the Chinese Aksai Chin claim line.
Middle sector:

- In this sector, India shares about 625 km long boundary with China which runs along the watershed from Ladakh to Nepal. The states of Himachal Pradesh and Uttarakhand touch this border with Tibet (China) in this sector. Both sides do not have much disagreement over border in this area.

Eastern Sector:

- In this sector, India shares 1,140 km long boundary with China. It runs from the eastern limit of Bhutan to a point near the Tali junction of Tibet, India and Myanmar. This boundary line is called McMahon Line. The boundary was established along the Himalayan crest of the northern watershed of the Brahmaputra, except where the Khamang, Subansiri, Dihang and Lohit rivers break through that watershed.
- China considers the McMahon Line illegal and unacceptable claiming that Tibetans representatives who had sign the 1914 Convention held in Shimla which delineated the Mc Mahon line on the map were not having rights to do so.

China's continued delligence, amplified by its state owned media outlets, on the issue suggest that the Asthana consensus between Prime Minister Narendra Modi and President Xi Jinping to not allow differences to become disputes, as a fragile one. Despite all provocations it should be kept in mind that Indian troops stand not on Indian territory but territory claimed by Bhutan and on Thimphu’s request to protect Bhutan’s territory, in line with India Bhutan revised friendship treaty 2007.

**Course of action to be taken:**

- Instead of highlighting the stand off as in India-China dispute, therefore the government must ensure that every step it takes is in consultation with Thimphu and make it clear that any final decisions it takes will not be about win or lose for India, but dictated by what is in Bhutan best interest.
- India must strengthen its border protection using both man and machine power along with infrastructure facilities.
- India need to be more proactive with its neighbours.
- Continue the discussions in order to resolve the border stand off.

Under the 2007 India-Bhutan Friendship Treaty, the two sides have agreed to “cooperate closely with each other on issues relating to their national interests. Neither Government shall allow the use of its territory for activities harmful to the national security and interest of the other.”
Sunderbans mangrove cover at risk

Why is in news?

Remote sensing and GIS-enabled data offer definite proof for the first time that the mangrove forest cover in the Sunderbans has been depleting alarmingly. From 1986 to 2012, 124.418 sq. km., or about 5.5% of the mangrove cover, was lost. Variable degrees of erosion was observed in at least 18 islands. The continuation of this process is a serious ecological threat, say experts.

- Noted islands experiencing erosion include Sagar, Gosaba, Dulibhasani, Dalhousie, Bhangaduni and Jambudwip.
- In the western part of sunderban delta, there is less fresh water flow and sediment supply. This has led to the starvation of sediment. Besides, the rate of sea level rise is higher than sediment supply. This has led to the erosion of Islands.

Concern:

A critical minimal inflow of freshwater is necessary for the luxuriant growth of mangroves. When freshwater inflow is missing, there is a change in mangrove succession, and freshwater loving species of mangroves are replaced by salt-water loving ones. The immediate impact of salinity will be on the fishing community, where commercially sought after fish species will be replaced by fish that does not have as much market value.

About Sunderbans:

The Sundarbans is a natural region in West Bengal and Bangladesh. It is the largest single block of tidal halophytic mangrove forest in the world. The Sundarbans covers approximately 10,000 square kilometres (3,900 sq mi) of which 60% is in Bangladesh with the remainder in India. It is a UNESCO World Heritage Site.

Assam to raise Special Rhino Protection Force for rhino protection

- The Assam government is going to raise a new Special Rhino Protection Force (SRPF) for better protection of the one-horned rhinos in Assam.
- State government has already started the process of recruitment for the proposed force. The cadre for the force will selected from local youths hailing from the fringe areas of the Kaziranga national park.
- After initial selection, recruits will be given necessary training. They will be also provided with arms and ammunition for better protection of the one horned rhinos.

About one-horned rhinos:

- The greater one-horned rhinoceros is the largest of the Asian Rhinos. Its preferred habitat is alluvial flood plains and areas containing tall grasslands along the foothills of the Himalayas. Formerly, they were extensively distributed in the Gangetic plains, but today they are restricted to small habitats in Indo-Nepal terai and North Bengal, and Assam.
- They are found in Kaziranga, Orang, Pobitara, Jaldapara (in Assam), Dudhwa (UP) National Park. Kaziranga National Park hosts two-thirds of the world’s Great One-horned rhinoceros (68% of worldwide population). It has been listed as Vulnerable on the IUCN Red List of Threatened Species.

Indian Rhino Vision (IRV) 2020

It is a partnership the Assam Forest Department, World Wide Fund for Nature (WWF), Bodoland Territorial Council, International Rhino Foundation (IRF) and US Fish and Wildlife Service. Its goal is to attain a wild rhino population of at least 3,000 in the Indian state of Assam by the year 2020.
Nine more bird, biodiversity areas in Kerala

Why is in news?

Nine more locations in Kerala have been identified as Important Bird and Biodiversity Areas (IBAs).

Key facts:
The new list was released by the Bombay Natural History Society, a partner of BirdLife International, in its recent publication, Important Bird and Biodiversity Areas in India Priority sites for conservation. With the latest addition, Kerala now has 33 IBAs. Kerala IBAs are home to three critically endangered species — White-rumped Vulture, Indian Vulture, and Red-headed Vulture. The newly identified IBAs of Kerala are

1. Ache coil Forest Division
2. Anamudi Shola National Park
3. Camel’s Hump Mountain
4. Kurinjimala Wildlife Sanctuary
5. Malayattoor Reserve Forest
6. Mankulam Forest Division
7. Mathikettan Shola National Park
8. Muthikutani-Siruvani

What are IBAs?

- The IBAs are “places of international significance for the conservation of birds and other biodiversity” and are “distinct areas amenable to practical conservation action,” according to BirdLife International.
- Declaring a site as an Important Bird and Biodiversity Area does not ensure that the site gets legal protection or becomes inaccessible to people. Instead BirdLife International encourages national and State governments to recognise the areas as sites of vital importance for conservation of wildlife and to empower local community-based conservation initiatives.

Birdlife international:

- BirdLife International (formerly the International Council for Bird Preservation) is a global partnership of conservation organization that strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources. It is the world’s largest partnership of conservation organisations, with over 120 partner organisations.
- BirdLife International publishes a quarterly magazine, World Birdwatch, which contains recent news and authoritative articles about birds, their habitats, and their conservation around the world. BirdLife International is the official Red List authority for birds, for the International Union for Conservation of Nature.

India’s TERI ranked second among world’s climate think tanks

Why is in news?

New Delhi-based The Energy Resources Institute (TERI) was ranked second among world’s best climate think tank by the International Centre for Climate Governance (ICCG). TERI was ranked number two under the category ‘2016 Top Climate Think Tanks in the Rest of the World-Absolute Global Rankings’ during ICCG’s 23rd annual conference of the European Association of Environmental and Resource Economists (EAERE) in Athens, Greece.

- ICCG is an internationally-renowned body whose activities focus on the design of climate policy and related governance issues. It rankings helps to highlight the scale and magnitude of work done by the think tanks working in the field of climate change.

The Energy Resources Institute (TERI)

TERI is a non-profit research, policy research organisation that conducts research work in the fields of energy, environment and sustainable development. It was established in 1974 as Tata Energy Research Institute and was renamed The Energy and Resources Institute in 2003.

It aims to focus on formulating local and national level strategies for shaping global solutions to critical issues. Its key focus lies in promoting clean energy, water management, pollution management, sustainable agriculture and climate resilience.
Earth facing sixth mass extinction

The sixth mass extinction of life on Earth is unfolding more quickly than feared, scientists have warned. Scientists call this as a case of biological annihilation occurring globally.

Globally, the mass die-off — deemed to be the sixth in the last half-billion years — is the worst since three-quarters of life on the Earth, including the non-avian dinosaurs, were wiped out 66 million years ago by a giant meteor impact. On an average, two vertebrate species disappear every year.

- More than 30% of animals with a backbone — fish, birds, amphibians, reptiles and mammals — are declining in both range and population.
- The mammal species that were monitored have lost at least a third of their original habitat. 40% of them — including rhinos, orangutans, gorillas, and many big cats — are surviving on 20% or less of the land they once roamed. The loss of biodiversity has recently accelerated.
- Several species of mammals that were relatively safe one or two decades ago are now endangered, including cheetahs, lions and giraffes. There are as few as 20,000 lions left in the wild, less than 7,000 cheetahs, 500 to 1,000 giant pandas, and about 250 Sumatran rhinoceros.
- Tropical regions have seen the highest number of declining species. In South and Southeast Asia, large-bodied species of mammals have lost more than four-fifths of their historical ranges.
- While fewer species are disappearing in temperate zones, the percentage is just as high or higher. As many as half of the number of animals that once shared our planet are no longer here, a loss described as “a massive erosion of the greatest biological diversity in the history of Earth”.

Factors behind the loss:

The main drivers of wildlife decline are habitat loss, overconsumption, pollution, invasive species, disease, as well as poaching in the case of tigers, elephants, rhinos, and other large animals prized for their body parts. Climate change is poised to become a major threat in the coming decades.
In a first, ‘White tiger’ spotted in Nilgiris

A photographer is believed to have spotted a rare ‘white tiger’ with a pale skin colour for the first time in the Nilgiris. The discovery has aroused interest among conservationists and forest officials. It is yet to be ascertained whether the white tiger is a true genetic mutant.

The tiger which was spotted in the Nilgiri Biosphere Reserve does not seem to be albino and was found to be whitish with golden brown patches. As per the scientists, genetic mutation among tigers changes an amino acid responsible for the normal colour being formed, resulting in “natural polymorphism”. According to the scientists, white tigers lack pheomelanin, which is responsible for the red-yellow hue in the skin coat.

Environment Ministry approves Projects in 3 States under NAFCC

The Union Environment Ministry approved three projects for climate change adaptation in three states viz. Rajasthan, Gujarat and Sikkim for funding under the National Adaptation Fund for Climate Change (NAFCC).

In this regard, the National Steering Committee on Climate Change (NSCCC) headed by Environment Secretary has approved the Detailed Project Reports (DPRs) submitted by these three state governments.

Projects approved

- **Sikkim**: The investment aims to address the issue of water security which are directly identified as climate resilience building interventions under the SAPCC.
- **Rajasthan**: It aims to bolster water security in villages under the Mukhya Mantri Jal Swavlamban Abhiyan. It aims to enhance the adaptive capacity of villages by making them self-reliant in terms of water requirement.
- **Gujarat**: The project seeks enhance the adaptive capacity of natural resource dependent communities to climate change in targeted villages of Kachchh district.

White Tigers

In India, white tigers are predominantly found in Rewa, Madhya Pradesh. In 2016, world’s first White Tiger Safari was inaugurated at Mukundpur in Satna district of Madhya Pradesh.

The first white tiger in Madhya Pradesh’s was spotted in Vindhya region in 1915. However, the rare breed of the big cat spotted for the first time died in 1920. In 1951, a white tiger cub named Mohan was captured by Rewa Maharaja Martand Singh. Later the tiger cub became the progenitor of all known white tigers in the world after the Maharaja arranged for its breeding.

White tigers in India are nothing but a pigmentation variant of the Bengal tiger. They have been reported in the wild from time to time in the Indian states of Assam, West Bengal, Bihar. These tigers have white fur because of the lack of the pigment pheomelanin, which is found in Bengal tigers with orange colour fur.

About National Adaptation Fund for Climate Change (NAFCC)

NAFCC is a flagship Scheme of Union Government launched in 2015 to provide 100% central grant to the State Governments for implementing climate change adaptation projects. The Scheme has been designed to fulfill the objectives of National Action Plan on Climate Change (NAPCC) and operationalise the State Action Plans on Climate Change (SAPCCs).

The objective of the fund is to assist states/UTs that are particularly vulnerable to the adverse effects of climate change in meeting the cost of adaptation. The National Bank for Agriculture and Rural Development (NABARD) is the National Implementing Entity (NIE) responsible for implementation of adaptation projects under the NAFCC.

Under this scheme, Union Government encourages States to come up with innovative and scalable projects to develop resilience against climate change and mainstream it in the planning processes.
Eco-bridges for the movement of tigers

- Telangana State is planning to construct eco-friendly bridges over a canal cutting across the tiger corridor linking the Tadoba-Andhari Tiger Reserve (TATR) in the Chandrapur district of Maharashtra with the forests in Telangana’s Kumram Bheem Asifabad district.
- The Telangana Irrigation Department has given its consent for the construction of the eco-bridges. Recommendations on the size and locations of the bridges are awaited from the National Board of Wildlife.

What’s the plan?
The ‘eco-bridges’ will be constructed at key spots along the 72 km-long, and at some places over a kilometre wide. The plan involves laying of fertile soil to grow grass and plants over the structure, so that fragmentation of the reserve forest is camouflaged.

Underwater ghost nets posing threat to marine ecosystem: Study

According to recent study, ghost nets (abandoned, lost or dumped fishing nets) have emerged as the greatest killers of the marine ecosystem off Kerala coast. These ghost nets may have long-term implications for marine life if no proper correctives are taken to deal with them. It may become major threat to the natural habitat and breeding ground of underwater fish.

Problem:
Ghost nets have destroyed or threatened many of the underwater reefs identified with flourishing fish stock because of its ‘stifling cover’. Globally, it is estimated that at least 10% of the reduced fish catch can be blamed on ghost nets, some of which have survived deep underwater for decades together.

There are four types of ghost nets that infest the bottom of the seas.

1. The first are the large fishing vessels that stray into the territorial waters and deploy large nets. These nets get caught in underwater reefs, forcing the fishing vessel to abandon them before leaving the territorial waters.
2. The second type of ghost nets are smaller and are used by fishermen, but are cut off by a passing vessel. They too drift at the bottom of the ocean floor and get attached to the rough features there.
3. The third type of ghost nets are those that get caught in violent currents and swivel down to the ocean floor, where they get stuck.
4. The fourth type are ghost nets are those which get abandoned at sea after three or four uses. These nets remain under water for decades if not centuries.
Sri Lanka bans bottom-trawling

Sri Lanka has banned the destructive fishing practice of bottom-trawling in their waters, making violators liable for a fine of LKR 50,000 (approximately ₹20,000) and face two years imprisonment. In this regard, an Amendment to the country’s Fisheries and Aquatic Resources Act was passed unanimously, in effect declaring the fishing method an offence.

Why the ban?
Bottom trawling is a destructive fishing practice which affects the marine ecosystem. The practice, which involves trawlers dragging weighted nets along the sea floor, is known to cause great depletion of fishery resources, and curbing it is in the interest of sustainable fishing.

Concerns raised by Tamil Nadu:
The development could directly impact a section of fishermen from Tamil Nadu, who engage in bottom-trawling and have often been found trespassing into Sri Lanka’s territorial waters.

Castor plant can reduce soil pollution: Study

✓ According to study conducted by researchers from University of Hyderabad, Castor bean plants can prove useful in fighting soil pollution. It was found that these plants can absorb toxic heavy metals from soil from these polluted areas due to industrial pollution.
✓ The roots, leaves and stem of these plants from the polluted areas contain heavy metals such as lead. It was also observed that these plants accelerate the remediation of polluted soils due to presence of some chemicals in them known as chelators which enhances the capability of the plant to accumulate heavy metals.

Significance:
This study highlights how castor plants which are having medical properties can also prove a boon in remediation in soil pollution. Government bodies can take a cue out of this study for natural remediation of soil pollution.

NABARD takes first step to access Green Climate Fund

India’s National Bank for Agriculture and Rural Development (NABARD) has signed an Accreditation Master Agreement (AMA) with the Green Climate Fund. With the signing of the AMA, NABARD becomes the first Indian organisation to get Direct Access Entity status and is the first step for the body to access GCF resources.

About GCF:
The GCF was set up in 2010 under the UNFCCC’s financial mechanism. It was formally established by a UNFCCC decision in Durban, South Africa in December 2011 to channel funding from developed countries to developing countries to allow them to mitigate climate change and also adapt to disruptions arising from a changing climate. It was central to the Paris climate agreement signed in 2015, that the world’s largest historical emitter.
Who will govern the GCF?
The Fund is governed and supervised by a Board that will have full responsibility for funding decisions and that receives the guidance of the COP. The Fund is accountable to, and functions under the guidance of, the COP.

NGT directs Uttarakhand, Himachal Pradesh to submit guidelines on forest fire

- The National Green Tribunal (NGT) has directed the Uttarakhand and Himachal Pradesh governments to submit the national forest fire prevention and control guidelines.
- The court has also asked both the state governments to inform it about the total number of forest fires till date starting from 2016. The tribunal had earlier directed the states to submit crisis management plan for prevention and control of forest fires to the Ministry of Environment and Forests (MoEF).

Background:
In Himachal Pradesh during 2016-17, there were 1,545 forest fires which affected 13,069 hectare causing loss of Rs 1.53 crore, whereas, in 2015-16, there were 672 fire incidents which caused harm in 5,749.95 hectare area causing loss of Rs 1.34 crore.

GM mustard policy: SC gives govt. time

The government has informed the Supreme Court that a policy decision on the commercial release of the Genetically Modified (GM) mustard crop is yet to be finalised. It said it was poring through the various suggestions on and objections to the commercial rollout of the GM crops. The court has granted the government one week to report back on when the policy would be finalised. It said the policy should be good-intentioned and well-informed.

Background:
The court had on October 17, 2016, extended the stay on the commercial release of the GM mustard until further orders. It had asked the Centre to collect public opinion before the release. The government had assured the court that there would be no commercial release of GM seeds till the views of the public were collected and placed before the appraisal committee.

What is a GM crop?
A GM or transgenic crop is a plant that has a novel combination of genetic material obtained through the use of modern biotechnology. For example, a GM crop can contain a gene(s) that has been artificially inserted instead of the plant acquiring it through pollination. The resulting plant is said to be “genetically modified” although in reality all crops have been “genetically modified” from their original wild state by domestication, selection, and controlled breeding over long periods of time.

GM crops in India:
- The GM mustard, developed by a Delhi University institution, is only the second food crop which got its clearance from the central regulator. The GEAC had earlier in 2010 cleared the Bt Brinjal but the decision was not accepted by then environment minister Jairam Ramesh. Currently, only Bt Cotton – a non-food GM crop – is commercially cultivated in the country.
An application for commercial release of the GM Mustard was filed in December 2015. The GEAC had subsequently set up a sub-committee to examine the safety aspect of the use of transgenic variety of the mustard. The subcommittee had last year given its safety clearance while noting that the GM Mustard is safe for human consumption and environment. Decision of the GEAC was, however, vehemently opposed by environmentalists and anti-GM groups.

**NGT bans nylon, synthetic manja**

**Why is in news ?**
The National Green Tribunal (NGT) has imposed nationwide blanket ban on the use of kite strings (manja), made of nylon or any synthetic material on the grounds that it poses a threat to animals and humans.

The judgement of Tribunal came on a plea filed by animal rights body People for Ethical Treatment of Animals (PETA) and others.

**Petition**
The petition filed by PETA and others had contended that ‘manja’ poses a grave threat to humans and animals as a number of deaths are caused by it every year. It has also alleged that sometimes these strings coated with sharp metals, traps and kill migratory birds. It also claimed that minor children were engaged by the cottage industry for the manufacture of ‘manja’, which caused respiratory problems as they inhaled harmful substances which were detrimental to their health.

**NGT Judgement**
The Tribunal has directed all state governments to prohibit the manufacture, sale, storage, purchase and use of synthetic manja or nylon threads and all other synthetic strings used for flying kites with immediate effect. It also ordered the authorities across the country to ban import of any synthetic manja or nylon thread or other similar threads coated with synthetic substances.

**National Green Tribunal (NGT)**
The NGT was established in 2010 under the National Green Tribunal Act, 2010 for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.

It is a specialized body equipped with the necessary expertise to handle environmental disputes involving multi-disciplinary issues. It also includes enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith.

It adjudicates matters relating to Water (Prevention and Control of Pollution) Act, 1974; Air (Prevention and Control of Pollution) Act, 1981; Environment (Protection) Act, 1986; Public Liability Insurance Act, 1991; Forest Conservation Act and Biological Diversity Act.

The NGT is guided by principles of natural justice and not bound by the procedure laid down under the Code of Civil Procedure, 1908. It is mandated to make and endeavour for disposal of applications or appeals finally within 6 months of filing. New Delhi is the Principal Place of Sitting NGT. Bhopal, Pune, Kolkata and Chennai are other regional sitting of the Tribunal.
NGT declares 100m from edge of Ganga as No-development Zone

The National Green Tribunal (NGT) has passed a slew of directions, measures, fines, and strict deadlines to rejuvenate River Ganga. It declared ‘No-Development Zone’ along an area of 100 metres from the edge of the river in the stretch between Haridwar in Uttarakhand and Unnao in Uttar Pradesh. This zone must be turned into green belts.

NGT directions

1. The NGT has banned dumping of waste of any kind within 500 metres from the edge of River Ganga. Rs. 50,000 environment compensation will be imposed on anyone who dumps waste in the river. The apex environment regulator also directed all authorities concerned to complete various projects including setting up of a sewage treatment plant and cleaning drains within two years.

2. The NGT also directed Uttarakhand and Uttar Pradesh governments to formulate guidelines for regulating religious activities on the ghats of Ganga River or its tributaries. It also ordered to stop indiscriminate extraction of groundwater from all industrial units falling in the catchment area of Ganga River.

3. The NGT also directed Uttar Pradesh government to be duty-bound to shift tanneries within six weeks, from Jajmau in Kanpur to leather parks in Unnao or any other appropriate place.

4. It also appointed a supervisory committee, headed by the secretary of the Union Water Resources Ministry and comprising IIT professors and officials from UP government to oversee implementation of the directions passed in its verdict. It also asked the committee to submit reports at regular intervals.

“Sagar Vani”, a mobile app, was launched recently on the occasion of Foundation Day of Ministry of Earth Sciences.

The ‘Sagar Vani’ is a software platform where various dissemination modes will be integrated on a single central server. The ‘Sagar Vani’ includes Multi Lingual SMS, Voice Call / Audio Advisory, Mobile Apps (User / Admin modules), Social Media (Facebook, Twitter, etc.), Email, GTS, Fax, Digital Display Boards, Radio / Television broadcast units, IVRS, Cloud Channels, etc.

- The system also has facility to provide access to various stakeholders (NGOs, State Fishery Departments, Disaster Management Authorities, etc.) so that they too will be able to further disseminate these ocean information and alerts to the user community.
- This ‘Sagar Vani’ system compares with the most advanced countries’ services in terms of speed of delivery, omni channel capabilities and diverseness of services. With this system, the services will be disseminated in local languages using advanced artificial intelligence and machine learning capabilities.
- For the first time in India, the power of television and cable network mediums for topical and alert dissemination services is being used.
- The ‘Sagar Vani’ will now serve the coastal community, especially the fishermen community with the advisories and alerts towards their livelihood as well as their safety at Sea.

India Quake

“India Quake” is a mobile app launched recently on the occasion of Foundation Day of Ministry of Earth Sciences.

About India Quake:

- To overcome the delay in dissemination of the information during earthquakes, India Quake Mobile App has been developed by the National Centre for Seismology (NCS) for automatic dissemination of earthquake parameter (location, time and magnitude) after the occurrence of earthquakes.
- The App will make information dissemination faster with no restrictions on the number of recipients.
Any citizen can download this App and get the real time earthquake location information on his/her mobile. Other than scientific and administrative benefits of the App, it will help in reducing panic amongst people during an earthquake. For example, if an earthquake occurs in Hindukush region, Afghanistan and is strongly felt in Delhi, then people in Delhi will know in less than 2 minutes that the earthquake has actually occurred in Afghanistan and not in Delhi.

Sensor network to map and predict pollution, effluents in Godavari

A group of U.S. researchers is working on a system to map undulating pollution trends in the Godavari, India’s second longest river.

- Using a mix of methods, including satellite-monitoring, traversing stretches of the river to collect water samples and using special sensors to measure bacterial and chemical pollution, the researchers are trying to develop a cost-effective forecast system.
- Through cloud-based data collection and real-time mapping systems, the research and implementation teams intend to demonstrate the importance and value of detecting and anticipating pollutants that enter the river in the form of human waste, organic materials, and chemical contaminants.
- The exercise is part of a Bill and Melinda Gates Foundation project to support the programme of the Administrative Staff College of India (ASCI) to provide city-wide sanitation improvements in urban Andhra Pradesh. Sensors to monitor river pollution are an emerging technological approach in India.

Objectives of the project:

The long-term objective is to be able to inform State officials and citizens of a probable spike in, say, levels of dangerous microbes or effluents, similar to weather and air pollution forecasts. Also, it is to be able to access “raw data” that could be used to inform the efficacy of a proposed faecal sludge treatment plant and whether behavioural interventions — including incentives or punishments — to restrict activities that pollute the river could actually work.

Godavari River:

The Godavari is the second longest river in India after the river Ganges having its source at Tryambakeshwar, Maharashtra.

It starts in Maharashtra and flows east for 1,465 kilometres (910 mi) emptying into Bay of Bengal draining the Indian states Maharashtra (48.6%), Telangana (18.8%), Andhra Pradesh (4.5%), Chhattisgarh (10.9%), Madhya Pradesh (10.0%), Odisha (5.7%), Karnataka (1.4%) and Puducherry through its extensive network of tributaries. Measuring up to 312,812 km2 (120,777 sq mi), it forms one of the largest river basins in the Indian subcontinent, with only the Ganges and Indus rivers having a drainage basin larger than it in India. Important tributaries include Pravara, Purna,mula,maneru, Manjira, Pranhita, Indravati and Sabari,sileru,peddavagu.
India, Japan civil nuclear deal comes into force

The landmark India-Japan civil nuclear agreement came into force. In this regard, Foreign Secretary S. Jaishankar exchanged the diplomatic notes with the Japanese envoy to India to formalise the completion of the process. The deal would enable Japan to export nuclear power plant technology as well as provide finance for nuclear power plants in India. It will also assist India in nuclear waste management and could undertake joint manufacture of nuclear power plant components under the Make in India initiative.

Comment
The India-Japan civil nuclear agreement reflects of the strategic partnership between India and Japan and will pave the way for enhanced cooperation in energy security and clean energy. It will also promote full cooperation between the two countries in the development and uses of nuclear energy for peaceful purposes on a stable, reliable and predictable basis.

PM visit to Israel

PM Modi is the first Indian prime minister to visit the Jewish state — the trip marks 25 years of the establishment of diplomatic relations between India and Israel. And for the first time, an Indian leader will not visit Palestine alongside.

President Pranab Mukherjee travelled to Israel in October 2015 — the first visit by an Indian President. A number of Ministers and parliamentarians too have visited Israel in the past three years.

Background:
January 2017 marked the 25th anniversary of diplomatic ties between India and Israel. India recognized Israel in September 1950 but deferred the establishment of full diplomatic relations until January 1992. India had sourced Israeli weapons during the war with China in 1962 and later, during the 1999 Kargil conflict. For the last two decades, trade and economic relations have taken an upward swing. While both governments prefer to publicly emphasize cooperation in the fields of agriculture and information technology, defense ties, especially arms sales, have been a major component of this flourishing partnership. India has become Israel’s largest arms export market in the world over the last decade (replacing China); and Israel became one of India’s largest arms supplier.

India Israel signed 7 agreements to co-operate in fight against terror:

1. A MoU signed between the department of Science and technology India and the national technological innovation authority Israel for setting up in India-Israel industrial R&D and technological innovation fund
2. India's ministry of drinking water and sanitation signed a MoU with Israel Ministry of National infrastructure energy and water resources on a national campaign for water conservation in India
3. A MoU on state water utility Reform was signed between the Uttar Pradesh Jal Nigam and the ministry of National infrastructure energy and water resources of Israel.
4. India-Israel Development Corporation on a three-year work programme in agricultural from 2018 to 2020
5. A plan of cooperation was signed between the Indian Space Research Organisation(ISRO) and the Israel space agency(ISA) regarding Corporation in atomic clocks
6. ISRO and ISA signed a MoU on cooperation in GEO-LEO optical link
7. ISRO and ISA signed another MoU on cooperation in electric propulsion for small satellites
8. Prime Minister Narendra Modi announced to start a new flight service connecting Delhi, Mumbai and Tel Aviv and invited youth of Israel to visit India
9. In a bid to enhance people to people contacts between India and Israel prime Minister Narendra Modi has announced the setting up of an Indian Cultural Centre in Israel.

Significance of the meet:

With this visit of PM Modi the Indo-Israel relationship will overcome the hesitations of history, and a strategic and political direction for the bilateral relationship will be set. In a major shift in foreign policy, New Delhi is dehyphenating Israel from Palestine and is prepared to deal with the two separately and independently. While Modi’s visit to Israel is historic, but his skipping Palestine is a tectonic shift. It can be seen as a transformation in India’s traditional pro-Palestinian positions.

Ethical concern:

India's evolving ties with Israel no doubt are based on pragmatism and the desire to eschew hypocrisy, but Mr. Modi has infused his visit with the symbolism and a substance that could well mark a point of departure in India's moral support to the Palestine cause.

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**Indo-Thai joint military exercise Maitree 2017 begins in Himachal Pradesh**

**Why is in news?**

"The armies of India and Thailand are conducting the yearly joint training exercise named Ex Maitree 2017 from July 3 to July 17 at Bakloh in Himachal Pradesh".

**About the event:**

- The joint exercise between the two armies is an annual event.
- The aim is to build and promote bilateral Army-to-Army relations exchanging skills and experiences and enhance inter-operability between the two armies.
- As part of the exercise the two armies will jointly plan and execute a series of drills for the neutralisation of likely threats that may be encountered in counter terrorism environment.
- The previous edition of the exercise was held at Krabi in Thailand in 2016.

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**BRICS ‘Beijing Declaration On Education’ Adopted For More Academic Cooperation**

**Why is news?**

BRICS ministers of education and assigned representatives have adopted ‘Beijing Declaration on Education’ in a recently held 5th meeting of BRICS Ministers of education at Beijing.
About Beijing Declaration on Education:

- According to the declaration, members states – Brazil, Russia, India, China and South Africa – are committed to the UN Sustainable Development Goal 4 (SDG4) Education 2030 which aims to “Ensure inclusive and equitable quality education and promote life-long learning opportunities for all” that was set within The 2030 Agenda for Sustainable Development.
- The declaration reiterated support for the BRICS Network University (NU) to collaborate in the fields of education, research and innovation. It also encouraged universities to participate in the BRICS University League.
- With the Beijing declaration, BRICS member states also decided to increase cultural cooperation through language education and multilingualism to promote mutual understanding of the history and culture of BRICS member states and to undertake initiatives to promote professionalization of academics in higher education through the BRICS Network University as a focus of future education development.
- The declaration emphasises to encourage more teachers and educational administrators to learn from experience of other countries in improving teacher quality and performance, and promoting the development of education through international exchanges.
- It was also decided to strengthen cooperation in the field of Technical and Vocational Education and Training (TVET), share ideas and experiences in the development of vocational educators, and develop projects that are of common interests to BRICS Member States. The declaration also encouraged to expand the number of scholarship opportunities to students across BRICS Member States.

India, ADB inks $220 million Loan Agreement for Rajasthan State Highways Investment Program

The Union Government and Asian Development Bank (ADB) have signed a $220 million loan agreement for improving connectivity as well as transport efficiency and safety on State Highways of Rajasthan.

The loan will be provided as the first tranche of the $500 million Rajasthan State Highways Investment Program, approved by ADB Board in May 2017. The Program will upgrade about 2,000 kilometers of state highways and major district roads to two-lane or intermediate-lane standards to meet road safety requirements.

US imposes new sanctions against Iran over ballistic missile program

- The United States has imposed new economic sanctions against Iran over its ballistic missile programme and for contributing to regional tensions.
- Under the new sanctions, the US Department of Treasury targeted 16 entities and individuals from Iran citing them as illicit Iranian actors or transnational criminal activity. Those sanctioned mainly targets Iran for developing drones and military equipment, producing and maintaining boats, and procuring electronic components.
- The sanctions were imposed day after US certified that Iran is complying with the 2015 Nuclear Deal and it will continue to receive nuclear-related sanctions relief. This was the second time, Trump administration certified Iran’s compliance to 2015 Nuclear Deal.
2015 Nuclear Deal:

- The 2015 Nuclear Deal was a preliminary framework agreement signed between Iran and P5+1 countries (United States, United Kingdom, Russia, France, China- plus Germany) and the European Union in July 2015. The deal is also called as Joint Comprehensive Plan of Action (JCPA) or Vienna agreement.
- The deal aims to stop Iran from acquiring a nuclear weapon in return for lifting international oil and financial sanctions. Under it, Iran has agreed to give up its most advanced centrifuges and use only its oldest models. But it still allows Iran to continue enrichment in lower quantities for civilian purposes such as power plants.
- As part of the deal Iran has agreed to reduce its stockpile of uranium by 98%. Under this deal, Iran could keep 300 kg enriched uranium for the next 15 years and it will get rid of extra uranium by shipping it to Russia. The deal also sets up a comprehensive inspections regime that gives inspectors from the International Atomic Energy Agency (IAEA) extraordinary and robust access to Iranian nuclear facilities.

Under this deal, global economic sanctions imposed over Iran nuclear programme will be removed. However sanctions related to other aspects of Iran’s behaviour, such as ballistic-missile programme, human-rights issues, support of terrorism and its will not be affected.

### BITs and pieces of trade with Israel

In their first 25 years of diplomatic relations, India and Israel have established and achieved a lot and there are enthusiastic and passionate discussions on both sides on how much more they can do. Indian prime minister’s first visit is considered ‘groundbreaking’ event in the diplomatic world. This is because it was the first visit of an Indian PM after the establishment of full diplomatic ties in 1992, and also because an Israeli PM, Ariel Sharon, had already visited India back in 2003.

**Why is Israel important for India?**

Growing trade and investment relations are a strong reason to study India-Israel relations on their own merit.

- Trade: Bilateral merchandise trade increased from $200 million in 1992 to around $4 billion in 2016, an increase of 2,000% in 25 years.
- FDI: Cumulative foreign direct investment (FDI) inflows from Israel, from April 2000 to March 2017, stood at $122 million. While these are low, constituting only 0.04% of total FDI inflows to India, there is enormous potential for Israeli investment in fields such as renewable energy and water management.
- Defence production, which is at the heart of the ‘Make in India’ campaign, is another area with significant potential for Israeli investment, a move that will help India save billions of dollars it currently spends on importing weapons from Israel.
- Arms: Israel is the third largest supplier of arms to India after Russia and the U.S. Investment in defence production will also give a fillip to domestic manufacturing, reduce dependence on bureaucratic state-owned ordnance factories and bring in new technology.

**Is an India-Israel BIT possible?**

In 1996, India and Israel signed a BIT. However, this was reportedly terminated by India when it unilaterally discontinued 58 BITs recently. For a new BIT to be negotiated, both sides will have to start afresh.

**Challenges ahead:**

There are challenges given the many fundamental differences Israel and India have on BITs, as outlined in their Model BITs of 2003 and 2016, respectively.

**Investor-state dispute settlement (ISDS) provision** that allows foreign investors to bring claims against a host state for alleged treaty breaches at international arbitral forums. The Israeli model gives an investor the choice to submit any investment dispute with a state to international arbitration if not resolved within six months through negotiations. The Indian model imposes many procedural and jurisdictional restrictions on an investor’s right to bring an ISDS claim. These include a foreign investor having to litigate in domestic courts for five years before pursuing a claim under international law. These requirements make it very difficult for a foreign investor to make efficient use of the ISDS provision.

**Definition of FDI:** Israel’s model provides a broad asset-based definition of foreign investment that covers both FDI and portfolio investment.

**MFN provision:** The Israeli model contains a broad most favoured nation (MFN) provision — a cornerstone of non-discrimination in international economic relations — which is missing in the Indian model. The absence of MFN, from Israel’s perspective, would mean that its businesses would have no remedy under international law if India were to discriminate against it, say, by offering greater incentives to another defence manufacturer over an Israeli one.

**Taxation:** The Indian model excludes taxation altogether from the purview of the BIT. Thus, the foreign investor cannot bring an ISDS claim even if taxes imposed are confiscatory, discriminatory or unfair. However, in the Israeli model, taxation-related measures are recognised as an exception only to MFN and national treatment provisions. Foreign investors can still challenge taxation-related measures for violating other BIT provisions such as the fair and equitable treatment or expropriation.
In sum, the Indian position on BITs is very pro-state, offering limited rights and protection to foreign investors. The Israeli position is the opposite. An India-Israel BIT looks difficult till both sides move away from their stated positions. Both sides should work towards having a BIT that reconciles investment protection with a state’s right to regulate.

World Petroleum Congress at Istanbul, Turkey

Why is in news?
The 22nd World Petroleum Congress (WPC) International Conference has begun at Istanbul, Turkey. India is also taking part in the conference.

WPC conference:
The tri-annual WPC Conference is widely recognized as the ‘Olympics’ of the oil and gas industry. It attracts Ministers, CEOs of Oil and Gas MNCs, experts and academics from the hydrocarbon sectors and provides an ideal forum to showcase potential of countries’ hydrocarbon sector. It also provides a platform to interact with policy makers, technologists, scientists, planners and management experts.

122 countries adopt global treaty banning nuclear weapons

A global treaty banning nuclear weapons was recently adopted at the United Nations. The treaty was adopted by a vote of 122 in favour with one country — NATO member The Netherlands voting against — while Singapore abstained.

This meet Led by Austria, Brazil, Mexico, South Africa and New Zealand, 141 countries joined in drafting the treaty that they hope will increase pressure on nuclear states to take disarmament more seriously. The treaty prohibits a full range of nuclear-weapon related activities, such as undertaking to develop, test, produce, manufacture, acquire, possess or stockpile nuclear weapons or other nuclear explosive devices, as well as the use or threat of use of these weapons. None of the nine countries that possess nuclear weapons — the United States, Russia, Britain, China, France, India, Pakistan, North Korea and Israel — took part in the negotiations or the vote. Even Japan — the only country to have suffered atomic attacks, in 1945 — boycotted the talks as did most NATO countries.

Why is it being opposed by nuclear powers?
The nuclear powers view the treaty as unrealistic and argue that it will not have any impact on reducing the global stockpile of 15000 atomic weapons

Nuclear powers argue their arsenals serve as a deterrent against a nuclear attack and say they remain committed to the nuclear Non-Proliferation Treaty (NPT).

They said a purported ban on nuclear weapons that does not address the security concerns which continue to make nuclear deterrence necessary cannot result in the elimination of a single nuclear weapon and will not enhance any country’s security, nor international peace and security.

Non-Proliferation Treaty:
The Treaty on the Non-Proliferation of Nuclear Weapons, commonly known as the Non-Proliferation Treaty or NPT, is an international treaty whose objective is to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy, and to further the goal of achieving nuclear disarmament and general and complete disarmament.

Opened for signature in 1968, the treaty entered into force in 1970.
North Korea claims successful test of its first intercontinental missile

North Korea has claimed that it has successfully test-fired its first intercontinental ballistic missile (ICBM) Hwasong-14 into waters near Sea of Japan. The claim was confirmed by United States. The launch appeared to be North Korea’s most successful missile test since its ballistic missile programme gathered pace in the late 1990s.

**About missile:**

- Based on missile’s height and trajectory path, US scientists claim that missile could potentially be powerful enough to reach Alaska. The missile had reached an altitude higher and flew longer than any of the North Korea’s previous similar tests. The missile had landed in Japan’s exclusive economic zone.
- North Korea will be 8th nation in the world to successfully test ICBM. Other countries that have ICBM technology are US, Russia, China, UK, France, Israel and India.

**What is Intercontinental ballistic missile (ICBM)?**

An ICBM is a missile launched by a land-based system that is intended to carry nuclear payloads. To qualify as an ICBM, a missile must have a minimum range of 5,500 km. The most significant difference between an ICBM and other ballistic missiles is its greater range and speed. It enables countries to strike exceptionally distant targets with minimum warning.

**Concern:**

US has strongly condemned the launch and added that it will never accept a nuclear-armed North Korea. The ICBM testing represents a new escalation of the threat to US and its allies and partners, the region and the world.

**India and Bangladesh have decided to construct bridge along Mizoram Border**

India and Bangladesh have decided to construct a bridge over Mizoram’s Khawthlangtuipui river (also known as Karnaphuli river) to facilitate trade and to improve communication between the two countries. The proposed bridge is expected to be constructed as closer as possible to the nearest custom station located in the Bangladesh side.

**Significance:**

The proposed bridge is expected to serve as an important link between India and Bangladesh. It would improve road connectivity between the two regions. The proposed bridge is also expected to strengthen the ties between the people of the two countries.
In the 12th G20 Summit held in Hamburg. The theme chosen for this year’s G20 Summit is “Shaping an Inter-connected World”. Issues like free and open trade, migration, sustainable development and global stability came up during the discussions. The leaders of the G20 countries has agreed for taking concrete steps to stop funding of the terror activities. The leaders have also pledged for a joint crackdown on the global scourge of terrorism and check its funding sources.

Action agenda at G20 to counter terrorism:

- G20 countries strongly condemned all terrorist attacks worldwide and pledged greater coordination to counter the menace.
- The leaders also agreed to facilitate swift action and targeted exchange of information between intelligence, law enforcement and judicial authorities.
- The private sector including the communication firms to curb the misuse of the internet for terror propaganda. Further, the leaders have also pledged to ensure terrorists are brought to justice.
- To make the international financial system entirely hostile to terrorist financing. The leaders have also called for taking strong measures against the terrorist organisation like ISIS/ISIL/Daesh, Al Qaida etc

Key Highlights of Hamburg Action Plan:

- **Tackle common challenges**: G20 members resolved to tackle common challenges to the global community, including terrorism, displacement, hunger, poverty and health threats, job creation, climate change, energy security and inequality including gender inequality, as a basis for sustainable development and stability.
- **Trade and globalisation**: They stressed on the importance of harnessing the benefits of globalisation, reaffirm the importance of transparency for predictable and mutually beneficial trade relations. They also underlined importance to boost employment by improving sustainable global supply chains, as an important source of job creation and balanced economic growth.
- **Continue to use all policy tools**: G20 members will use all policy tools such as monetary, fiscal and structural - individually and collectively to achieve the goal of strong, sustainable, balanced and inclusive growth, while enhancing economic and financial resilience.
- **Paris Agreement**: They agreed that the 2015 Paris Agreement is irreversible and reiterated the importance of fulfilment of the UNFCCC commitments by developed countries in providing means of implementation including financial resources to assist developing countries with respect to both mitigation and adaptation actions.
- **Sustainable livelihoods**: G-20 members are committed to increase innovation on sustainable and clean energies and energy efficiency, work towards low greenhouse-gas emission energy systems and harness digitalisation to achieve the goals of the 2030 Agenda for Sustainable Development.
- **Global Health systems**: G-20 members called for strengthening health systems and safeguarding against health crises. The leaders called on the UN to keep global health high on the political agenda and strive for cooperative action to strengthen health systems worldwide, including through developing the health workforce. The leaders also stressed on combating Anti-Microbial Resistance (AMR), which is a growing threat to public health and economic growth.

India’s PM presented an 11-point action agenda for counterterrorism at the summit.

1. Deterrent action against nations supporting terrorism must be made compulsory, such nations should be barred from G20.
2. G20 nations must exchange lists of suspected terrorists and their supporters.
3. Legal processes such extradition should be simplified and expedited.
4. Comprehensive Convention on International Terrorism (CCIT) should be adopted soon.
5. UNSC resolutions and other international processes should be effectively implemented.
6. G20 nations should give emphasis to de-radicalisation programmes and exchange best practices.
7. Terror financing should be curtailed by means of Financial Action Task Force (FATF) and other means.
8. Weapons and Explosive Action Task Force (WEATF) should be constituted on lines of FATF so that source of weapons to the terrorists is stopped.
9. G20 nations should cooperate in cyber security, with a focus on terrorist activities.
10. National Security Advisors on Counter Terrorism mechanism should be constituted.
China sends PLA unit to man overseas base at Djibouti

China has dispatched People’s Liberation Army (PLA) personnel to man its first overseas military base at Djibouti in the strategic Indian Ocean region, a move likely to spark concerns in the U.S.

Base at Djibouti:
- The establishment of the PLA Djibouti base was a decision made by the two countries after friendly negotiations, and accords with the common interest of the people from both sides.
- The base is aimed at ensuring China’s performance of missions, such as escorting, peace-keeping and humanitarian aid in Africa and West Asia.
- The base will also conduct overseas tasks, including military cooperation, joint exercises, evacuating and protecting overseas Chinese and emergency rescue, as well as jointly maintaining security of international strategic seaways.

Why is US worried?
Base at Djibouti is close to Camp Lemonnier. Established after the terrorist attacks of Sept. 11, 2001, Camp Lemonnier is home to 4,000 personnel. Some are involved in highly secretive missions. Strategists worry that a naval port so close to Camp Lemonnier could provide a front-row seat to the staging ground for U.S. counterterrorism operations in the Arabian Peninsula and North Africa. The base, which is run by the Navy and abuts Djibouti’s international airport, is the only permanent U.S. military installation in Africa.

About Djibouti:
Djibouti, officially the Republic of Djibouti, is a country located in the Horn of Africa. It is bordered by Eritrea in the north, Ethiopia in the west and south, and Somalia in the southeast. The remainder of the border is formed by the Red Sea and the Gulf of Aden at the east.
BRICS Labour & Employment Ministers’ Meet in China

China is the chair for the BRICS Labour & Employment Ministers’ Meet for the year 2017. This year’s meeting was held in Chongqing, China. The meeting concluded with the adoption of the BRICS Labour and Employment Ministerial Declaration by the BRICS Labour and Employment.

BRICS Labour and Employment Ministerial Declaration:

- The Declaration covered a variety of areas that are of critical importance to all BRICS countries including India and called upon strengthening collaboration and cooperation on these through appropriate institutionalisation.
- These areas consisted of: “Governance in the Future of Work”, “Skills for development in BRICS”, “Universal and sustainable social security systems”, “BRICS Network of Labour Research Institutions”, “BRICS Social Security Cooperation Framework” and “BRICS entrepreneurship research”.

EU, India set up fund for investments

The European Union (EU) and India have announced the establishment of an Investment Facilitation Mechanism (IFM) for EU investments in India.

Investment Facilitation Mechanism (IFM)

- The IFM has been established with the key objectives of paving the way for identifying and solving problems faced by EU companies and investors with regard to their operations in India.
- The mechanism will allow for a close coordination between the European Union and the Government of India with an aim to promote and facilitate EU investment in India. The IFM will cover new investors as well as those already established in India.
- The IFM is also going to serve as a platform for discussing general suggestions from the point of view of EU companies and investors with regard to ease of doing business in India. Ease of doing business is a fundamental priority of the Indian Government’s Make in India Campaign and the establishment of IFM for facilitating EU investments in India is another step to achieve this goal.
- As part of the IFM, the EU Delegation to India and the DIPP will hold regular high level meetings to assess and facilitate “ease of doing business” for EU investors in India. This will include identifying and putting in place solutions to procedural impediments faced by EU firms and investors in establishing or running their operations in India.

Background:

The IFM builds on the Joint Statement of the 13th EU-India Summit held in Brussels in March 2016, where the EU had welcomed India’s readiness to establish such a mechanism and leaders from both sides had reaffirmed their shared commitment to oppose protectionism and to work in favour of a fair, transparent and rule-based trade and investment environment.

Sri Lanka clears revised deal for Hambantota port

- Sri Lanka has signed a US $1.1 billion deal to sell a 70% stake of the strategic Hambantota deep-sea port to China. Hambantota port is a deep-water port in the southern tip of Sri Lanka. It sits close to busy east-west shipping lanes connecting Europe and Asia.
- The deal was signed between Sri Lanka Ports Authority (SLPA) and China Merchants Port Holding Co. (CMPort). Under the 99-year lease agreement, CMPort will invest up to US $1.1 billion in the port and marine-related activities. CMPort will be only responsible for commercial operations, while the SLPA will handle port’s operations, security and services.
- As per the deal, while the Chinese would manage port operations, no naval ship, including Chinese ones, can call at Hambantota without Sri Lanka’s permission.

Why is India worried?

India’s apprehensions about the apparently growing Chinese presence in the island are well known, given the two countries’ competing strategic interests in the island. The Hambantota port is part of China’s Belt and Road Initiative. Chinese control of Hambantota, which is part of its modern-day “Silk Route” across Asia and beyond, as well as a plan to acquire 15,000 acres (23 sq miles) to develop an industrial zone next door, had raised fears that it could also be used for Chinese naval vessels.
India rejects OIC move on vigilantism

India has strongly rejected the resolutions of the Organisation of Islamic Cooperation (OIC) that had expressed concern about the recent attacks on people by cow-vigilante groups. India has termed the resolutions adopted at the OIC’s latest foreign ministers’ meeting as “factually incorrect”.

**Background:**
The OIC noted that incidents of violence against the Muslim community were being committed by extremist Hindu groups and said it viewed such incidents “with grave concern”.

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**OIC:**
Organisation of Islamic Cooperation is an international organization founded in 1969, consisting of 57 member states. The organisation states that it is “the collective voice of the Muslim world” and works to “safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony“. The OIC has permanent delegations to the United Nations and the European Union.

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US House passes Bill for strengthening defence ties with India

The US House of Representatives has passed a $621.5 billion defence policy bill that proposes to advance defence cooperation with India. An amendment in this regard was adopted by a voice vote by the House as part of the National Defense Authorisation Act (NDAA) 2018, beginning 1 October this year. NDAA-2018 was passed by the House 344-81.

- As passed by the House, NDAA-2018 asks the State Department and the Pentagon to develop a strategy that addresses common security challenges, the role of American partners and allies in India-US defence relationship, and role of the defence technology and trade initiative.
- Following the passage of the National Defence Authorisation Act, the Secretary of Defence and Secretary of State have 180 days to develop a strategy for advancing defence cooperation between the United States and India.
- It also asks them to address how to advance the communications interoperability and security memorandum of agreement and the basic exchange and cooperation agreement for geospatial cooperation.

The previous NDAA-2017 had designated India as a major defence partner which brings India at par with closest American partners in terms of defence trade and technology transfer.

Cabinet approves MOC in respect of tax matters between India and BRICS countries

The Union Cabinet has approved signing of Memorandum of Cooperation (MOC) in respect of tax matters between India and the BRICS countries namely, Brazil, Russia, China and South Africa.

- The MoC aims to promote cooperation amongst BRICS Revenue administrations on common areas of interest in tax matters and capacity building and knowledge sharing. It envisages regular interaction amongst the heads of Revenue administration of BRICS countries to continue discussion on common areas of interest.
- It also strive towards convergence of views and meeting of the experts on tax matters to discuss the contemporary issues in areas of international tax. MoC will also accord confidentiality and protection to information exchanged under it.

The MoC will stimulate effective cooperation in tax matters. Moreover, the collective stand of BRICS countries can prove to be beneficial not only to member countries but also to other developing countries in long run in tax matters steered by the G20.

The MoC will stimulate effective cooperation in tax matters. The collective stand of BRICS countries can prove to be beneficial not only to these countries but also to other developing countries in the long run in tax matters being steered by the G20.

**Background:**
The Heads of Revenue of the BRICS countries have been meeting regularly to discuss the potential areas of cooperation in tax matters and to exchange opinions and views based on the existing commitment to openness, solidity, equality, mutual understanding, inclusiveness and mutually beneficial cooperation, as stated in the Goa Declaration issued on October 16, 2016. The BRICS countries have identified four areas of mutual interest on which understanding and cooperation can be further strengthened. The heads of Revenue of BRICS countries in their meeting held on the sidelines of FTA plenary at Beijing, China in May, 2016 decided to sign a MoC outlining these areas of cooperation.
Presidential assent for Kambala Bill

**Why is in news:**
The Prevention of Cruelty to Animals (Karnataka Amendment) Bill, 2017, has finally received Presidential assent. With this, all the hurdles for resuming Kambala — the traditional slush-track buffalo race of the coastal districts — are cleared.

**Background:**
The Karnataka Legislative Assembly passed the Bill in February 2017 to put the traditional sport out of the ambit of PCA Act. Governor of Karnataka then referred the Bill to the President for his assent. In April, the Union Home Ministry suggested modifications to the Bill and returned it to the State. It wanted the government to modify or omit the phrase “subject to such other conditions as may be prescribed”, which would open the window for inclusion of more such sports.

Ahmadabad gets World Heritage City tag

The 606-year-old walled city of Ahmadabad, which was founded by Sultan Ahmad Shah, has become India’s first World Heritage City. The World Heritage Committee (WHC) of UNESCO announced this. Ahmadabad is recognized the city as the cradle of India’s non-violent freedom struggle led by Mahatma Gandhi.

- The decision was taken during the ongoing 41st session of the World Heritage Committee in the Polish city of Krakow, which acknowledged the preservation efforts made by the city in keeping its historical fabric intact.
- The city’s historic characteristics include densely-packed traditional houses (‘pols’) in gated traditional streets (‘puras’) with features such as bird feeders, public wells and religious institutions.
- The Walled City of Ahmadabad will now join the likes of Paris, Cairo, and Edinburgh. Of the 287 World Heritage Cities across the globe, only two were hitherto on the Indian subcontinent: Bhaktapur in Nepal and Galle in Sri Lanka. The UNESCO tag will add immense brand value to the city and boost tourism.

About Kambala:
Kambala in its traditional form is non-competitive with buffalo pairs made to race one after another in paddy fields, which is considered a thanksgiving to the Gods for protecting the animals from diseases. Over the years, it has however become an organised sport with animal rights activists claiming that the buffaloes run in the race due to fear of being beaten, which the organisers dismiss, saying no violence is involved and that several modifications had been made to ensure that it is an animal friendly event.
Saint Mother Teresa’s blue-bordered sari an Intellectual Property

The famous blue-bordered sari of Mother Teresa, who has been canonised as Saint Teresa of Calcutta by the Vatican, has been recognized as an Intellectual Property of the Missionaries of Charity. The Trade Marks Registry, Government of India, has granted the registration of the trade mark for that pattern of blue border of sari.

UNESCO puts Old City of Hebron on its heritage in danger list

The UNESCO World Heritage Committee acting on a proposal brought by Palestine has put the West Bank city of Hebron on its list of world heritage in danger. This has made Israel angry and has triggered a new Israeli-Palestinian spat at the international body.

Salient Facts

The inclusion of the Old City of West Bank into the list of World Heritage in danger is aimed at drawing world’s attention to the situation in Hebron.

✓ The resolution for declaring Hebron as a protected area of outstanding universal value was brought by the Palestine and the resolution was fast-tracked by the UNESCO on the basis that the site was under severe threat. Palestine accuses Israel for involving in violations, vandalism and for causing damage to properties in the area.

Israel concern:

✓ Israel has rejected the Hebron resolution saying that the resolution’s reference to the city as Islamic denies thousands of years of Jewish connection with the city.
✓ Israel believes that Hebron is the birthplace of the Jewish people. The religious site at the Hebron was originally built by the Jewish King Herod, which was later added to by the Muslim caliphs.

Okinoshima Island: Japan’s men-only island gets UNESCO heritage tag

Why is in news?

✓ Okinoshima Island, Japan’s men-only island was declared as a UNESCO world heritage site. The island will be the 17th set of Japanese cultural assets to be granted this status and overall 21st in the list.
✓ The island is part of the prefecture’s Munakata region. It is located in south-west Japan between the main island of Kyushu and the Korean Peninsula in the Sea of Japan (East Sea). It still follow strict taboos from ancient times, including the controversial ban on women from entering the island.

Okinoshima Island is an ancient religious site in Japan that is considered sacred by the local Munakata Taisha. Entries of women are strictly banned on the island. Even male visitors need to take off their clothes and take a naked bath (purifying bath) before visiting the shrine.

It is permanently manned by a Shinto priest who prays the island’s goddess, in a tradition that has been kept up for centuries. The island covers an area of 240 acres and has a maximum elevation of 244 m. Since ancient times, it was an important window for foreign trade in Japan, forming part of a trade route that linked the archipelago to the Korean peninsula and China.
200th anniversary celebrations of the Paika Rebellion: Odisha

The President of India Shri Pranab Mukharjee recently inaugurated the "Bicentenary celebration of the heroic Paika Rebellion of Odisha, a valiant uprising of Paikas against the British rule" organised by the Ministry of Culture.

Two-hundred years ago in 1817, a valiant uprising of soldiers led by Buxi Jagabandhu (Bidyadhars Mohapatra) took place in Khurda of Odisha. This is known as Paika rebellion. Many scholars, researchers and historians have opined that the Paika Rebellion of 1817 was India’s first organized armed rebellion against British Raj (then British East India Company rule).

Reason for the revolt:

- The Paikas were the traditional land-owning militia of Odisha and served as warriors. When armies of the East India Company overran most of Odisha in 1803, the Raja of Khurda lost his primacy and the power and prestige of the Paikas went on a decline. The British were not comfortable with these aggressive, warlike new subjects and set up a commission under Walter Ewer to look into the issue.
- The commission recommended that the hereditary rent-free lands granted to the Paikas be taken over by the British administration and this recommendation was zealously adhered to. They revolted against the British.
- However, the rebellion had several other underlying causes – like the rise in the price of salt, abolition of the cowrie currency for payment of taxes and an overtly extortionist land revenue policy.
- Although initially the Company struggled to respond they managed to put down the rebellion by May 1817. Many of the Paik leaders were hung or deported. Jagabandhu surrendered in 1825.
President Pranab Mukherjee, PM Modi Launch India's Biggest Tax Reform: GST

Goods and Services Tax (GST), India's biggest tax reform, was launched at midnight at Parliament's historic Central Hall, by President Pranab Mukherjee and Prime Minister Narendra Modi. With the stroke of the gong, current tax rates are replaced by GST rates. It is the fourth time since Independence that an event was held there at midnight. The last three celebrated India's Independence and that is among the reasons that the Congress had listed for boycotting the GST launch. Several other opposition parties too stayed away. GST, which replaces a slew of indirect taxes with a unified tax, is set to dramatically reshape the country's 2 trillion dollar economy.

Union Cabinet approves draft bills to replace GST ordinances for J&K

- The ordinances extend the provisions of the Central Goods and Services Tax Act, 2017 referred to as (CGST Act) and Integrated Goods and Services Tax Act, 2017 referred to as (IGST Act) to Jammu & Kashmir to complete rolling out GST regime the Himalayan State.

The Central government earlier had promulgated ordinances to make the Central GST and Integrated GST (IGST), which deals with inter-state commerce, applicable to all states.

However, provisions of these Central laws were not applicable to J&K unlike the rest of India, as the state is having a special constitutional status.

Under this different procedure, President Pranab Mukherjee had promulgated two ordinances regarding the introduction of the GST in J&K.
CCEA approves selling 51% stake in HPCL to ONGC

- The Cabinet Committee on Economic Affairs (CCEA) has approved sale of government’s 51.11% stake along with management control in HPCL (Hindustan Petroleum) to ONGC. HPCL will continue as PSU after the acquisition.
- HPCL will add 23.8 million tonnes of annual oil refining capacity to ONGC’s portfolio, making it the third-largest refiner in the country after Indian Oil Corporation (IOC) and Reliance Industries.
- Prior to the merger, HPCL will take over Mangalore Refinery and Petrochemicals Ltd (MRPL) to bring all the refining assets of ONGC under one unit.
- ONGC currently owns 71.63% of MRPL while HPCL has 16.96% stake in it. MRPL will be the third refinery of HPCL, which already has units at Mumbai and Visakhapatnam.

There are only six major PSUs in the oil sector, ONGC and Oil India Ltd being the oil producers, IOC, HPCL and BPCL are in refinery business and GAIL is in midstream gas transportation business.

The rest, such as ONGC Videsh, Numaligarh Refinery Ltd, Chennai Petroleum Corp (CPCL) and MRPL are subsidiaries of one of these six PSUs.

Union Finance Minister Arun Jaitley in his 2017-18 Budget had talked about creating an integrated oil behemoth. After that oil companies were asked to give their options. ONGC had evaluated options of acquiring either HPCL or BPCL, the two downstream oil refining and fuel marketing companies. It had found that acquisition of BPCL, country’s second-biggest fuel retailer is too expensive. On the other hand, HPCL’s acquisition easier as its market cap is of Rs 58,485.55 crore and buying government’s entire 51.11% stake would entail an outgo of Rs 29,900 crore.

Centre to grant NIIF ₹20,000 cr

The Department of Economic Affairs has signed an agreement with the NIIF for a ₹20,000 crore contribution to the Fund.

About NIIF:
- The National Investment and Infrastructure Fund (NIIF) was proposed in Union Budget 2015.
- In the last week of December, the government has set up this Rs. 40000 crore fund to provide long term capital for infrastructure projects.
- The objective of NIIF is to maximise economic impact through infrastructure development in viable projects both greenfield and brownfield, including stalled projects, mainly in the core infra sector.
- NIIF has been structured as a fund of funds and set up as Category II Alternate Investment Fund (AIF) under the Securities and Exchange Board of India (SEBI) Regulations.

RBI limits Customer liability in Online Banking

Why is in news?
RBI has issued directions on ‘Customer Protection – Limiting Liability of Customers in unauthorised Electronic Banking Transactions’. RBI has issued the revised directions amidst a recent increase in customer grievances related to unauthorised transactions.
**Highlights**

- If the customers report to the banks regarding the loss they suffer through online banking transactions within three days, then the amount involved will be credited to their accounts within a time period of 10 days. Any loss suffered by the customer after reporting of the unauthorised transaction will be borne by the concerned bank. In sum, there will be “zero liability of a customer” in the case of third party breach where the deficiency lies neither with the bank nor with the customer but elsewhere in the system.

- The customer is required to report to the bank within three working days after receiving the communication from the bank regarding the unauthorised transaction.

- In cases of customer reporting the third party fraud with a delay of four to seven working days, then the liability of customer in such cases would be up to Rs 25,000.

- In cases of negligence caused by the customer by sharing of payment credentials, the customer is liable to bear the entire loss until the unauthorised transaction is reported to the bank.

- If the customer reports about the unauthorised transaction after seven days, then the liability of the customer would be determined as per the bank’s Board approved policy.

- The bank has to credit the amount involved in the unauthorised electronic transaction to the customer’s account within 10 working days of reporting of fraud. The bank has to do this without waiting for settlement of insurance claim if any.

- The banks should ask its customers to mandatorily register for SMS alerts and e-mail for email alerts for electronic banking transactions.

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**First Maize Based Mega Food Park in Kapurthala, Punjab**

The foundation stone for First Maize based Mega Food Park was recently laid in Kapurthala, Punjab.

**Significance of Maize based Mega food park:**

- Maize is an amazing cereal and is an alternate to paddy and wheat. Maize is rich in protein, provides nutritional requirements that India needs and Maize consumes much lesser water and could contain the problem of further water depletion.

- Maize Based Mega Food Park is the first major and serious step in the history of India for containing the desertification problem of Punjab and would make farmers turn to maize cultivation which need less water for more production.

- Maize is being used by different industries for seed, starch, brewery, food additives, sweeteners etc and it is also a basic raw material to thousands of industrial products like oil, proteins, pharmaceutical, cosmetics, beverages, film, textile, gum, value added foods, paper industries, bio-ethanol etc.

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**About Mega Food Parks:**

To give a major boost to the food processing sector by adding value and reducing food wastage at each stage of the supply chain with particular focus on perishables, Ministry of Food Processing Industries is implementing Mega Food Park Scheme in the country.

The Scheme of Mega Food Park aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastages, increasing farmers’ income and creating employment opportunities particularly in rural sector.
India to import crude oil from US for first time

India, the world’s third-largest oil importer, for the first time will import crude oil from the United States. The purchase comes after Prime Minister Narendra Modi’s visit to the US in June 2017 when President Donald Trump had assured that US looks forward to export more energy products to India.

**Facts:**

- Indian Oil Corp (IOC) has bought 1.6 million barrels of US Mars crude (a heavy, high-sulphur grade) and 400,000 barrels of Western Canadian Select that will be delivered onboard a Very Large Crude Carrier. The import will take place after IOC gets the carrier in October 2017 from PetroChina.
- The oil will be loaded off the US Gulf Coast. The import of crude from US could become an alternative source for the Indian companies for the supply of heavy, high-sulphur grades as feedstocks, which typically sell at a lower cost relative to other oil types. Besides IOC, Bharat Petroleum Corp Ltd (BPCL) is second Indian refiner which also has planned to buy its first ever US crude oil cargo and has issued a purchase tender.
- India will be the latest Asian country to buy US crude after Japan, South Korea, Thailand, Australia, China and Taiwan as they seek to diversify oil imports from other regions after the OPEC production cuts raised prices of Middle East heavy-sour crude (grades with a high sulphur content).

India’s forex reserves at record-high of $386.53 billion

- According to RBI, India’s foreign exchange (Forex) reserves have increased by $4.007 billion to touch a record high of $386.539 billion in the week that ended 30th June 2017.
- The components of India’s Foreign Exchange Reserves include Foreign currency assets (FCAs), Special Drawing Rights (SDRs), Gold and RBI’s Reserve position with International Monetary Fund (IMF).
- The increase forex in the reporting week was due to increase FCAs. It rose by $3.724 billion to $362.388 billion. Gold reserves also increased by $252.8 million to $20.348 billion. India’s special drawing rights (SDRs) with the International Monetary Fund (IMF) also rose by $11.8 million to $1.479 billion. The RBI’s reserve position with IMF also increased by $18.9 million to $2.322 billion.
- FCAs forms major part of the overall reserves. It consists of US dollar and other major non-US global currencies. It also comprises of investments in US Treasury bonds, bonds of other selected governments, deposits with foreign central and commercial banks. FCAs also include with them the effects of appreciation or depreciation of non-US currencies like the euro, pound, and yen and is expressed in terms of dollars.

Cabinet approves IRDAI’s admission as a signatory to IAIS, MMoU

- The Union Cabinet approved Insurance Regulatory and Development Authority’s (IRDAI) admission as a signatory to International Association of Insurance Supervisors (IAIS), Multilateral Memorandum of Understanding (MMoU).
- The IAIS is a global framework for cooperation and information exchange between insurance supervisors. The IAIS-MMoU is a statement of its signatories’ intent to cooperate in the field of information exchange as well as procedure for handling information requests.
- It provides a formal basis for cooperation and information exchange between the Signatory Authorities regarding the supervision of insurance companies where cross-border aspects arise mainly due to absence of any bilateral agreements.

With increasing integration of financial market and growing number of internationally active insurance companies there is increased need for mutual cooperation and information exchange between insurance industry supervisors. In this background the IRDAI has become a signatory member of the IAIS-MMoU.

**Insurance Regulatory Authority of India (IRDA)**

IRDA is an apex statutory body that regulates and develops the insurance industry in India. It was constituted as per provisions of Insurance Regulatory and Development Authority Act, 1999. Its headquarter is in Hyderabad.

The functions of IRDA are to protect the rights of insurance policy holders; provide registration certification to life insurance companies; renew, modify, cancel or suspend this registration certificate as and when appropriate; promote efficiency in the conduct of insurance business; promote and regulate professional organisations connected with the insurance and reinsurance business; regulate investment of funds by insurance companies; adjudication of disputes between insurers and intermediaries or insurance intermediaries.
India to join new global foreign exchange committee

India will soon get a seat on the Global Foreign Exchange Committee (GFXC), a newly-constituted forum of central bankers and experts working towards promotion of a robust and transparent forex market.

- The newly expanded and formalised GFXC, which will meet regularly, replaces a similar but more informal organisation of eight foreign exchange committees — namely those from Australia, Canada, Euro area, Hong Kong, Japan, Singapore, UK and the US.
- The GFXC will also now include representatives from existing, or soon to be established, foreign exchange committees or similar structures in Brazil, China, India, Korea, Mexico, South Africa, Sweden and Switzerland.

The objectives of the GFXC are:

- To promote collaboration and communication among the local foreign exchange committees (FXCs) and non-GFXC jurisdictions with significant FX markets;
- To exchange views on trends and developments in global FX markets, including on the structure and functioning of those markets, drawing on information gathered at the various FXCs;
- To promote, maintain and update on a regular basis the FX Global Code (the Code) and to consider good practices regarding effective mechanisms to support adherence.

5 States, a UT sign pact with Centre on e-Marketplace

- In a spirit of cooperative federalism, 5 States and a Union Territory (UT) have formally adopted the Centre’s initiative called the Government e-Marketplace (GeM).
- The States and the UT that signed an MoU with the Centre include Andhra Pradesh, Assam, Gujarat, Telangana, Puducherry and Arunachal Pradesh.

What you need to know about GeM?

It aims to ensure that public procurement of goods and services in India worth more than Rs. 5 lakh crore annually is carried out through the online platform for transparency and to eliminate corruption.

It aims to transform the way in which procurement of goods and services is done by the Government Ministries/Departments, PSUs, autonomous bodies etc. DGS&D with technical support of NeGD (MeitY) has developed GeM portal for procurement of both Products & Services. GeM is a completely paperless, cashless and system driven e-marketplace that enables procurement of common use goods and services with minimal human interface.
New gold bond scheme may draw more investors

The Government announced a few changes in its Sovereign Gold Bond (SGB) Scheme recently.

Changes introduced are as follows:

- The primary change was the increase in the limit to 4 kg (from 0.5kg) for individuals, HUF (Hindu undivided family) and 20 kg for Trusts. This was probably done to encourage high net-worth individuals, rich farmers as well as trusts to invest in these bonds.
- Flexibility has been given to Finance Ministry to design and introduce variants of SGBs with different interest rates and risk protection/pay-offs that would offer investment alternatives to different category of investors.

Why was the scheme introduced?

The sovereign gold bond was introduced by the Government in 2015. While the Government introduced these bonds to help reduce India’s over dependence on gold imports, the move was also aimed at changing the habits of Indians from saving in physical form of gold to a paper form with Sovereign backing.

crypto currencies trade may come under SEBI

The government is considering the introduction of a regulatory regime for virtual or crypto currencies, such as Bitcoin, that would enable the levy of the Goods and Services Tax (GST) on their sale. The new regime may possibly bring their trading under the oversight of the stock market regulator, Securities and Exchange Board of India (SEBI).

Benefits of regulation of these currencies:
Proper regulation of these currencies will “promote” a formal tax base, while keeping a tab on their use for illegal activities such as money laundering, terror funding and drug trafficking.

What are cryptocurrencies?
Crypto-currency, that is planned to be brought under the regulatory regime, is a digital currency which allows transacting parties to remain anonymous while confirming that the transaction is a valid one. It is not owned or controlled by any institution – governments or private. There are multiple such currencies — bitcoin, ethereum, ripple are some of the popular ones. Currently, they are neither illegal nor legal in India.

Need for regulation:
Cryptocurrencies have gained popularity in the last few years. Currently, they are neither illegal nor legal in many countries including India. The market cap for all crypto-currencies has just crossed $100 billion, with most of the increase coming in the past few months. On April 1, 2017, the total market cap was just over $25 billion, representing a 300% rise in just over 60 days. One bitcoin today is worth as much as 60 grams of gold.

Why banning cryptocurrencies altogether is not a good idea:
Banning will give a clear message that all related activities are illegal and will disincetivise those interested in taking speculative risks. It will also impede tax collection on gains made in such activities and that regulating the currency instead would signal a boost to blockchain technology, encourage the development of a supervision ecosystem (that tracks legal activities and may also assist in tracking illegal activities) and promote a formal tax base.

Concerns associated with this move:
However, the government is wary that regulation will provide legitimacy to “what is currently ambiguous,” and may lead to further rise in its valuation and end up contributing “to the investment bubble”.

Union Government clears three export infrastructure plans under TIES

The Union Government for the first time has given approval three infrastructure proposals to address the infrastructure problem under the Trade Infrastructure for Export Scheme (TIES).

Decision in this regard was taken at the Inter-Ministerial Empowered Committee (EC) meeting on TIES, chaired by Commerce Secretary

These three proposals include:
1. Integrated Cargo Terminal (ICT) at the Imphal International Airport,
2. Modernisation of infrastructure facility for marine exports in Karnataka

**Background**

✓ According to Department Related Parliamentary Standing Committee on Commerce March 2016 report, deficient infrastructure severely hurting the competitiveness of India’s exports. Moreover, the manner in which infrastructure is being operated in the country is also obstacles to ensure competitiveness in manufacturing of goods and exports.

✓ It is estimated that the logistic cost in India is about 14% of the GDP whereas in advanced economies like United States and European Union, it is 8% and 10% of the GDP respectively. Besides, certain sectors dependent on logistics lose as much as 2% on sales return due to sub-optimal logistic capability.

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**About Trade Infrastructure for Export Scheme (TIES)**

The scheme replaces Assistance to States for creating Infrastructure for the Development and growth of Exports (ASIDE), a centrally sponsored scheme to address the needs of the exporters. Its objective is to **enhance export competitiveness by bridging the gap in export infrastructure**, create focused export infrastructure and first-mile and last-mile connectivity. It is being implemented from FY18 till FY20 with budgetary allocation of Rs. 600 crore.

The beneficiaries of the scheme will be all central and state agencies including Commodities Boards, Export Promotion Councils, SEZ authorities and Apex Trade Bodies recognised under EXIM policy of Central Government are eligible for financial support.

Under the scheme, the cost of projects will be equally shared by the Centre and the states in form of grant-in-aid. In normal cases centre will borne 50% of the total equity in the project. For projects located in north-eastern and the Himalayan region.

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**Government releases National Trade Facilitation Action Plan**

The Union Government released the 76 point National Trade Facilitation Action Plan (NTFAP). It was released by Union Finance Minister Arun Jaitley in New Delhi. The NTFAP has been adopted by the National Committee on Trade Facilitation (NCTF), reflecting Government’s commitment to implement the Trade Facilitation Agreement (TFA).

**Key Facts**

**Aims of the action plan:** Transform **cross border clearance ecosystem** through efficient, transparent, risk based, co-ordinated, digital, seamless and technology driven procedures supported by state-of-the-art sea ports, airports and land borders.

**Objectives of the action plan:** Achieve improvement in **ease of doing business** by reduction in cargo release time and cost, transparent and predictable legal regime, move towards paperless regulatory environment and improved investment climate through better infrastructure.

**Activities listed in the Action Plan:** It lists out specific activities which would be carried out by all regulatory agencies like Customs, Drug Controller, Plant Quarantine, FSSAI, DGFT etc. in time bound manner. The co-ordination among all the stakeholders is the key to achieve the objective of Trade facilitation.
- It not only covers the activities coming under the TFA but also goes beyond the ambit of TFA, defined as TFA Plus category. It covers many activities in the areas of infrastructure augmentation, particularly the road and rail infrastructures leading to ports, airports, Land Customs stations, ICDs that cuts across all stakeholders for which various ministries like Civil Aviation, Shipping, Railways, Home Affairs, Road transport and Highways, Finance, Commerce etc have been assigned specified targets. All actions falling under the plan have been categorised by prioritising the activities into short term, mid-term and long-term activities.

**Monitoring of the plan:** The plan will be monitored by the Steering Committee (the operational arm of the NCTF) chaired by the Revenue Secretary and the Commerce Secretary. Further it will be reviewed by the Cabinet Secretary.

**Background:**
Earlier in August 2016, the Union Government had constituted NCTF headed by the Cabinet Secretary in accordance with Article 23.2 of the WTO-TFA. It comprises stakeholders from the Government and the private sectors including trade community. It is headed by Cabinet Secretary.

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**Pradhan Mantri Vaya Vandana Yojana (PMVVY)**

- Pradhan Mantri Vaya Vandana Yojana (PMVVY), a pension scheme exclusively for senior citizens, has been launched. PMVVY is a Pension Scheme exclusively for the senior citizens aged 60 years and above.
- The Scheme can be purchased offline as well as online through Life Insurance Corporation (LIC) of India which has been given the sole privilege to operate this Scheme.

**Benefits under the Pradhan Mantri Vaya Vandana Yojana (PMVVY):**

- Scheme provides an assured return of 8% p.a. payable monthly (equivalent to 8.30% p.a. effective) for 10 years.
- Pension is payable at the end of each period, during the policy term of 10 years, as per the frequency of monthly/quarterly/half-yearly/yearly as chosen by the pensioner at the time of purchase.
- The scheme is exempted from Service Tax/GST.
- On survival of the pensioner to the end of the policy term of 10 years, Purchase price along with final pension installment shall be payable.
- Loan upto 75% of Purchase Price shall be allowed after 3 policy years (to meet the liquidity needs). Loan interest shall be recovered from the pension installments and loan to be recovered from claim proceeds.
- The scheme also allows for premature exit for the treatment of any critical/terminal illness of self or spouse. On such premature exit, 98% of the Purchase Price shall be refunded.
- On death of the pensioner during the policy term of 10 years, the Purchase Price shall be paid to the beneficiary.

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**IBBI notifies rules for bankruptcy probe**

The Insolvency and Bankruptcy Board of India (IBBI) has notified regulations for inspection and investigation of service providers registered with it. Under the Insolvency and Bankruptcy Code (IBC) implemented by IBBI, service providers are insolvency professional agencies, entities, professionals and information utilities.

**New regulations:**

The investigation authority has to serve a notice intimating the entity concerned about the probe at least 10 days in advance. However, this requirement can be done away with on grounds such as apprehensions that the records of the particular service provider might have been destroyed before the probe starts.
The GST Council has formed a Selection Committee under the Chairmanship of Cabinet Secretary to identify and recommend eligible persons for appointment as the Chairman and Members of the National Anti-profiteering Authority under GST.

- The National Anti-profiteering Authority is tasked with ensuring the full benefits of a reduction in tax on supply of goods or services flow to the consumers.
- When constituted by the GST Council, the National Anti-profiteering Authority shall be responsible for applying anti-profiteering measures in the event of a reduction in rate of GST on supply of goods or services or, if the benefit of input tax credit is not passed on to the recipients by way of commensurate reduction in prices.
- The National Anti-profiteering Authority shall be headed by a senior officer of the level of a Secretary to the Government of India and shall have four technical members from the Centre and/or the States.
- The constitution of the National Anti-profiteering Authority is expected to bolster consumer confidence and ensure all stakeholders reap the intended benefits of GST.

**Powers and functions of the authority:**

In the event the National Anti-profiteering Authority confirms the necessity of applying anti-profiteering measures, it has the power to order the business concerned to reduce its prices or return the undue benefit availed along with interest to the recipient of the goods or services. If the undue benefit cannot be passed on to the recipient, it can be ordered to be deposited in the Consumer Welfare Fund. In extreme cases the National Anti-profiteering Authority can impose a penalty on the defaulting business entity and even order the cancellation of its registration under GST.

**India’s Alternate Governor on the Board of Governors of the Asian Development Bank (ADB)**

Subhash Chandra Garg, Secretary, Department of Economic Affairs (DEA), Ministry of Finance, Government of India has been appointed as India’s Alternate Governor on the Board of Governors of the Asian Development Bank (ADB), Manila, Philippines.

**About ADB:**

It is a regional development bank established on 22 August 1966 and is headquartered in Philippines. It aims to facilitate economic development of countries in Asia. It also aims for an Asia and Pacific free from poverty.

**Membership:**

The bank admits the members of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, formerly known as the United Nations Economic Commission for Asia and the Far East) and non-regional developed countries. Currently, it has 67 members – of which 48 are from within Asia and the Pacific and 19 outside.

**Voting:**

ADB was modelled closely on the World Bank, and has a similar weighted voting system where votes are distributed in proportion with member’s capital subscriptions.

**Funding:**

Pragnya IAS Academy
Delhi Hyderabad Bangalore
9880487071 9880486671
www.upsccivilservices.com www.pragnyaias.com
ADB raises funds through bond issues on the world’s capital markets. ADB also rely on its members’ contributions, retained earnings from its lending operations, and the repayment of loans. **Japan holds the largest proportions of shares at 15.67%**. The United States holds 15.56%, China holds 6.47%, India holds 6.36%, and Australia holds 5.81%.

**Board of Governors:**
It is the highest policy-making body of the bank. It is composed of one representative from each member state. The Board of Governors also elect the bank’s President who is the chairperson of the Board of Directors and manages ADB. The Alternate Board of Governors are nominated by Board of Governors of ADB’s 67 to represent them at the Annual Meeting that meets formally once year to be held in a member country.

**Loans:**
It offers both Hard Loans and Soft loans. The ADB offers “hard” loans from ordinary capital resources (OCR) on commercial terms, and the Asian Development Fund (ADF) affiliated with the ADB extends “soft” loans from special fund resources with concessional conditions.

**NPCI receives final nod from RBI to function as Bharat Bill Payment Central Unit**

National Payments Corporation of India (NPCI), the umbrella organisation for all retail payment systems, has said it has received a final nod from the Reserve Bank of India to function as the Bharat Bill Payment Central Unit (BBPCU) and operate the Bharat Bill Payment System (BBPS). The final clearance from RBI comes almost a year after NPCI launched the BBPS pilot project to make payment of utility bills easier.

**BBPS:**
- The Bharat Bill Payment System (BBPS) is an RBI conceptualised system driven by National Payments Corporation of India (NPCI).
- Under the BBPS framework, a customer will be able to pay several bills such as electricity, telephone, water, gas, and DTH television at a single location—physical or electronic—and receive instant confirmation once the payment is made.
- Nearly 45 crore bills are permitted under BBPS.
- It is a one-stop payment platform for all bills, providing an interoperable and accessible “Anytime Anywhere” bill payment service to customers across the country with certainty, reliability and safety of transactions.
- Payments through BBPS may be made using cash, transfer cheques and electronic modes. Bill aggregators and banks, who will function as operating units, will carry out these transactions for the customers.

**Transfer unclaimed accruals to fund Senior Citizens’ Welfare: IRDA**

As per the new direction from IRDA, insurance companies can no longer retain unclaimed amounts of policyholders if those accruals are more than 10 years old. Such sums need to be, instead, transferred to the Senior Citizens’ Welfare Fund (SCWF) of the Centre.

**Background:**
The direction from the Insurance Regulatory and Development Authority of India has come in the backdrop of the amendment made in April to the Senior Citizens’ Welfare Fund Rules. The amendment expanded the purview beyond the unclaimed amounts in small savings and other saving schemes of the Centre, PPF and EPF. It brought in unclaimed amount lying with banks, including cooperative banks and RRBs; dividend accounts, deposits and debentures of companies coming under the Companies Act; insurance companies and Coal Mines PF.

**Senior Citizens Welfare Fund:**
The Centre brought in Senior Citizens’ Welfare Fund Act, 2015 (SCWF) as part of the Finance Act, 2015, which mandates transfer of unclaimed amounts of policyholders to the fund (SCWF) after a period of 10 years. The fund will be administered by an Inter-Ministerial Committee, headed by a Chairperson. The Committee will be competent to spend money from the fund for satisfying various objectives. The accounts of the fund will be open to audit by CAG, regularly. The Central Government will present the annual report and the one furnished by CAG.
China produces gas from ‘flammable ice’ under South China Sea

- China has successfully produced natural gas from methane hydrate, also known as “flammable ice”, in an experimental project in the South China Sea. The government has promised to “actively develop” natural gas hydrate over the 2016-2020 five-year plan period.
- Flammable ice consists of methane trapped within water crystals, and has been identified as a potential new gas source for China. Officially known as methane clathrates or hydrates, they are formed at very low temperatures and under high pressure.
- They can be found in sediments under the ocean floor as well as underneath permafrost. One cubic metre of the compound releases about 160 cubic metres of gas, making it a highly energy-intensive fuel.
- Many countries including the US and Japan are working on how to tap those reserves, but mining and extracting are extremely difficult.

Why is it important?
Methane hydrates are thought to have the potential to be a revolutionary energy source that could be key to future energy needs – likely the world’s last great source of carbon-based fuel. Vast deposits exist basically underneath all oceans around the globe, especially on the edge of continental shelves. Countries are scrambling for a way to make the extraction safe and profitable.

Accessing the power of this flammable ice has been difficult, for two reasons.
1. These reserves are often distributed over a large area rather than concentrated in one spot as oil or natural gas reserves often are.
2. The bigger problem, however, is that, true to their moniker as flammable ice, methane hydrates are unstable and potentially explosive. Drilling into the seafloor could destabilize the methane ice crystals and cause explosions, spewing vast troves of methane into the atmosphere, where it is a more potent greenhouse gas than carbon dioxide (CO2).

Scientists develop world’s sharpest laser

Scientists from Physikalisch-Technische Bundesanstalt (PTB) in Germany have developed the world’s sharpest laser with record-breaking precision. This precision can be useful for various applications such as optical atomic clocks, radio astronomy, precision spectroscopy, testing the theory of relativity and carry out new precision measurements on ultracold atoms.

What is Laser?
A laser (light amplification by stimulated emission of radiation) is a device that emits light through a process of optical amplification based on the stimulated emission of electromagnetic radiation. Major difference between laser and other sources of light is that, laser emits light coherently. Laser light is used in numerous applications in industry, medicine and information technologies. It also brought about a real revolution in fields of research and in metrology etc.

Features of sharpest laser:

- Theoretically, laser light has only one colour, wavelength or frequency. In reality, however, there is always a certain line width. This newly developed laser has line width of only 10 miliHertz (0.01 Hz), — closer to the ideal laser than ever before.
- In addition to the new laser’s extremely small line width, researchers also have found out that the emitted laser light’s frequency was more precise than what had ever been achieved before.
Scientists for first time store small movie clip in DNA of living bacteria

- Scientists from Harvard Medical School for first time have encoded a small movie clip in the DNA of living bacterial cells and then played it back.
- They had used the **CRISPR gene-editing technique** to encode and retrieve reconstructed frames of a classic 1870s racehorse in motion sequence of photos into the genome of common gut bacteria E. coli.
- Scientists have found out that despite the genetic modification, the bacteria thrived and multiplied. The film stored in the DNA of bacteria was also well preserved and was intact even in new generation of bacteria.

**CRISPR gene-editing technique:**

CRISPR is short form of **clustered regularly interspaced short palindromic repeats**. It allows to selectively edit genome parts and replace them with new DNA stretches. **Cas9 is an enzyme that can edit DNA**, allowing the alteration of genetic patterns by genome modification. CRISPR is a collection of DNA sequences that direct Cas9 where to cut and paste. CRISPR-Cas9 technology has the potential to revolutionise the treatment of blood diseases, tumours and other genetic diseases.

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**How DNA store information?**

The information in the DNA is stored in strings i.e. in the form four-letter DNA code. It is basically sequences of four building blocks (nuclear strands) abbreviated as A (Adenine), C (Cytosine), T (Thymine) and G (Guanine) found in DNA molecule. Specific sequences of these blocks give the body directions for creating particular proteins.

Basically digital devices store information in binary format (1s and 0s) i.e. in a two-letter code that produces strings of 1s and 0s. For ex. capital ‘A’ stored as 01000001 in binary format. In case of converting and storing digital information in DNA involves translating between the two sequences or codes of four building blocks. For ex. capital ‘A’ converted and stored as AATATG.

The DNA digital data storage technology uses artificial DNA made using oligonucleotide synthesis machines for storage and DNA sequencing machines for retrieval of stored data. Using this technology strings of DNA can be custom-made that can carry the new code, and store information that code contains.

DNA digital data storage technology has very long durability i.e. scientists can store digital information in DNA sequences for **thousands of years**. Information stored in DNA consumes very little space. However, making this technology practical and much cheaper using current technology is hugely expensive.

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**NASA to shoot Didmyos asteroid into new flight path in DART test**
NASA is developing the first-ever mission that will deflect a near-Earth asteroid, and help test the systems that will allow mankind to protect the planet from potential cosmic body impacts in the future. The Double Asteroid Redirection Test (DART) – which is being designed and would be built and managed by the John Hopkins Applied Physics Laboratory – is moving from concept development to preliminary design phase.

**What you need to know about the DART?**
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.

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**Scientists develop super-flexible and strong artificial silk**

Scientists from the University of Cambridge have developed super-stretchy and strong artificial (synthetic) spider silk, almost entirely composed of water. The synthetic spider silk mimics properties of spider silk, one of nature's strongest materials for a range of applications such as making eco-friendly textiles and sensors.

**Composition**
The fibres of the synthetic spider silk are spun from hydrogel, a soupy material which is 98% water, the remaining 2% of the hydrogel is made of naturally available silica and cellulose. The chemical interactions between the different components enable to pull long fibres from the gel. The water from hydrogel evaporates after it is stretched for 30 seconds, leaving a strong fibre which is both strong and stretchy.

**Properties**

- The fibres of the synthetic spider silk are extremely thin threads and are of few millionths of a metre in diameter. They resemble miniature bungee cords and can absorb large amounts of energy. They are sustainable, non-toxic, less energy-intensive and can be made at room temperature.

- The fibres are capable of self-assembly at room temperature, and are held together by supramolecular host, where atoms share electrons. They can support stresses in the range of 100 to 150 megapascals, which is similar to other synthetic and natural silks.

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**Scheme for IPR Awareness – Creative India; Innovative India**

Taking forward the National Intellectual Property Rights (IPR) Policy 2016, a ‘Scheme for IPR Awareness – Creative India; Innovative India’ has been launched by Cell for IPR Promotion and Management (CIPAM) under the aegis of the Department of Industrial Policy and Promotion (DIPP) under ministry of commerce.

- The Scheme aims at raising IPR awareness amongst students, youth, authors, artists, budding inventors and professionals to inspire them to create, innovate and protect their creations and inventions across India including Tier 1, Tier 2, Tier 3 cities as well as rural areas in the next 3 years.

- The Scheme will conduct over 4000 IPR awareness workshops/seminars in academic institutions (schools and colleges) and the industry, including MSMEs and Startups, as also IP training and sensitization programs for enforcement agencies and the judiciary.

- Workshops will cover all vital IP topics including international filing procedures, promotion of Geographical Indications and highlighting the ill effects of piracy and counterfeiting.

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**ISARC in Varanasi**

The Union Cabinet has approved the establishment of the International Rice Research Institute (IRRI), South Asia Regional Center (ISARC) at campus of National Seed Research and Training Center (NSRTC) in Varanasi.

- Under the proposal, a Centre of Excellence in Rice Value Addition (CERVA) will be set up in Varanasi. This will include a modern and sophisticated laboratory with capacity to determine quality and status of heavy metals in grain and straw. The Centre will also undertake capacity building exercises for stakeholders across the rice value chain.

- This Center will be the first international Center in the eastern India and it will play a major role in harnessing and sustaining rice production in the region. It is expected to be a boon for food production and skill development in the eastern India and similar ecologies in other South Asian and African countries.

**Benefits from ISARC:**

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Pragnya IAS Academy
Delhi Hyderabad Bangalore
9880487071 9880486671
www.upscivilservices.com www.pragnyaias.com
The Centre will help in utilizing the rich biodiversity of India to develop special rice varieties. This will help India to achieve higher per hectare yields and improved nutritional contents. India’s food and nutritional security issues will also be addressed. The Centre will support in adopting value chain based production system in the country. This will reduce wastage, add value and generate higher income for the farmers. The farmers in Eastern India will benefit in particular, besides those in South Asian and African countries.

**Saraswati, a supercluster of galaxies**

A team of Indian scientists have discovered a previously unknown ‘supercluster’ of galaxies, some four billion light years away from Earth, and named it Saraswati. This is one of the largest known structures in the neighbourhood of the universe, 4,000 million light-years away from Earth and roughly more than 10 billion years old. Its mass extends over the scale of 600 million light years.

The discovery of Saraswati supercluster will help astronomers in understanding galaxy formation and evolution, effect of superclusters on environment of the galaxies.

**Astrosat, Chandra and Hubble jointly detect massive cosmic explosion on Proxima Centauri**

India’s first dedicated space observatory AstroSat along with other space and earth-based observatories have detected a massive coronal explosion on Proxima Centauri, sun’s closest star neighbour.

The explosion was detected as part of joint multi-wavelength simultaneous observational campaign undertaken by three space-based observatories, Astrosat, Chandra and Hubble Space Telescope and the ground-based High Accuracy Radial velocity Planet Searcher (HARPS) observatory.

- The massive coronal explosion has sent out powerful solar flare having energy of 10-raised-to-30 ergs, about 100 times a typical solar flare. Such powerful flaring may have produced large radiations and particles which may significantly influence the atmosphere of the Proxima Centauri b and affect its habitability.
- The habitability of Proxima Centauri especially its ability to sustain its atmosphere and in particular to sustain water in liquid form may get affected due to abnormal planetary atmosphere heating due absorption of the high-energy photons like the ultraviolet (UV) and X-ray photons released by the coronal explosion.
- If such a massive flare occurs in our Sun, it might have a devastating effect on power grids, interrupt broadcasts and electricity, affect electronic instruments, and cause excess UV radiation in space.

**Coronal explosion**: is an unusually large release of plasma and magnetic field from the solar corona. They often follow solar flares and are normally present during a solar prominence eruption. The plasma is released into the solar wind, and can be observed in coronagraph imagery.

**Scientists to chase solar eclipse using NASA jets**

- In a first, scientists are planning to chase the shadow of the Moon using NASA’s research jets during the upcoming total solar eclipse in the US, in order to capture the clearest ever images of the Sun’s outer atmosphere.
- The jets will capture the clearest images of the Sun’s corona to date and the first-ever thermal images of Mercury, revealing how temperature varies across the planet’s surface.

**Why solar eclipse?**
The total solar eclipse provides a rare opportunity for scientists to study the Sun, particularly its atmosphere. As the Moon completely covers the Sun and perfectly blocks its light during an eclipse, the typically faint corona is easily seen against the dark sky.

**Background:**
- The corona is the outermost layer of the Sun, starting at about 1300 miles (2100 km) above the solar surface (the photosphere). The temperature in the corona is 500,000 K (900,000 degrees F, 500,000 degrees C) or more, up to a few million K.
- The corona cannot be seen with the naked eye except during a total solar eclipse, or with the use of a coronagraph. The corona does not have an upper limit.

### Why scientists are interested in studying the Corona?

The corona is heated to millions of degrees, yet the lower atmospheric layers like the photosphere – the visible surface of the Sun – are only heated to a few thousand degrees. Scientists are not sure how this inversion happens.

One theory proposes micro explosions, termed **nanoflares** – too small and frequent to detect individually, but with a large collective effect – might release heat into the corona. **No one has yet directly seen nanoflares.** It is hoped that the new experiment might reveal their effects on the corona.

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### IISER Scientists develop Gelator to remove oil from spills

- Scientists from the Indian Institute of Science, Education and Research (IISER), Thiruvananthapuram have developed gelator that can suck up oil and congeal it.
- The gelator is hydrophobic material that has property of oleophilic (oil-loving) and takes up oil when it comes in contact with it. It can be used to recover marine oil spills with a simple, efficient and cost-effective method.
- **How it works**
  - The gelator is developed using a cheap raw material mannitol and cellulose pulp through a one-step process. In this process the mannitol gets adsorbed on the cellulose fibre through hydrogen bonding.
  - The adsorption process changes the cellulose matrix from being very hydrophilic (water-loving) to hydrophobic (water repelling).
  - The property of gelator to self-assemble to form micro fibres makes congealing of oil possible and the oil loses its fluidity and gets trapped within the entangled fibrous network to form a rigid gel.
  - Gelation essentially **turns the liquid oil into semi-solid** and this allows congealed oil to be simply scooped out using a scoop or a sieve.
  - During the studies, it was found that the **gelator was able to absorb and congeal 16 times its own weight of oil**. Even, the absorbed oil can be recovered by applying pressure or fractionated by a simple distillation process.

**Applications:** Gelator can also serve as a more efficient, quick and cost-effective way for absorption of crude oil from the sea following marine spill. Unlike other alternatives, the gelator can be easily applied over oil-water mixture and no solvent is needed for spraying it thus making it environment friendly.
**NASA’s Juno spacecraft completes flyby over Jupiter’s Great Red Spot**

NASA’s unmanned spacecraft Juno has successfully peered into the Jupiter’s giant storm known as the Great Red Spot. It became first space probe to complete flyby of Jupiter’s Great Red Spot.

**Jupiter’s Great Red Spot**
The Great Red Spot on Jupiter is a massive storm (cyclone) measuring about 16,000 km in diameter. It is largest known storm in the solar system. It has been monitored since 1830 and has possibly existed for more than 350 years. The winds in the storm are clocked at hundreds of km an hour around its outer edges. Little is known about the forces driving it. The spot appears as a deep, red orb surrounded by layers of pale yellow, orange and white. The storm is believed to have been shrinking in recent years.

**About Juno spacecraft**

NASA had launched unmanned spacecraft Juno on August 5, 2011 from Cape Canaveral, Florida as part of its New Frontiers program. It has been orbiting Jupiter, solar system’s largest planet from July 2016.

The spacecraft has been named from Greco-Roman mythology. It is orbiting Jupiter from pole to pole, 5,000 kilometers above planet’s cloud tops. It has mission life is still February 2018.

Its mission is to understand the origin and evolution of Jupiter, investigate the existence of a solid planetary Jupiter’s core, map Jupiter’s intense magnetic field, measure the amount of water and ammonia in the deep atmosphere and observe Jupiter’s aurora.

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**GSI discovers millions of tonnes of precious metals and minerals in Indian waters**

- Scientists from the Geological Survey of India (GSI) have discovered the presence of millions of tonnes of precious metals and minerals deep under the waters within the Exclusive Economic Zone (EEZ) of peninsular India.
- They have confirmed the presence large amount of lime mud, phosphate-rich and calcareous sediments, hydrocarbons, metalliferous deposits and micronodules. They believe that deeper and more extensive exploration could lead to a larger treasure trove.
- The presence of lime mud, phosphate-rich sediments was discovered off Karwar, Mangaluru and Chennai coasts, gas hydrate in the channel-levee system of Mannar Basin off the Tamil Nadu coast, icbro-manganese nodules around Lakshadweep Sea and cobalt-bearing ferro-manganese crust from the Andaman Sea.

GSI had carried out the ‘High Resolution Seabed Mapping and Natural Resource Evaluation’ using three state-of-the-art research vessels — Samudra Ratnakar, Samudra Kaustab and Samudra Saudikama. The main objective of the survey was to identify potential zones of favourable mineralisation and evaluate marine mineral resources.

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**About Geological Survey of India (GSI)**

The GSI is a government organisation in India, attached to the Ministry of Mines for conducting geological surveys and studies. It is one of the premier organisations of earth science survey and research in the world.

The GSI was established in 1851 and is one of the oldest of such organisations in the world and the second oldest survey institution in the country. It is the prime provider of basic earth science information to the government, industry and the general public. Its main functions is related to creation and updation of national geoscientific information and mineral resource assessment.
Tata Motors unveils India’s first Bio-CNG bus

India’s largest Commercial Vehicles manufacturer Tata Motors has unveiled country’s first Bio-CNG (bio-methane) bus. The bus was rolled out at the Urja Utsav, bio-energy programme, organised by the Union Ministry of Petroleum and Natural Gas.

Key Facts:
✓ In the Urja Utsav, Tata Motors showcased its designed and developed bio-methane engines (5.7 SGI & 3.8 SGI) for LCV, ICV & MCV buses. It also displayed three engines, along with the lead model viz. Tata LPO 1613 with 5.7 SGI NA BS-IV IOBD-II compliant bus.
✓ The first of its kind bio-methane bus will provide an alternate fuel technology to cater the need for a greener country. Its use will also contribute in a positive manner to the Smart Cities Mission. It will also serve as a good option for wet garbage management.

Biomethane

Biomethane is a naturally occurring gas which is produced by anaerobic digestion of organic matter such as dead animal and plant material, manure, sewage, organic waste, etc. This gas gets produced out of natural degradation process, escapes into the atmosphere unused. If it is trapped and used in automobile engines, it reduces the net impact on environment and at the same time produces useful power.

Scientists develop Bio-glue for wound healing

✓ Scientists have developed a super strong, flexible Bio-glue for wound healing without causing toxicity. It has been inspired by an adhesive material (glue) secreted by slugs that sticks to biological tissues
✓ Slugs naturally secrete a special kind of mucus (adhesive material) in its place when threatened, making it difficult for a predator to pry it off its surface.

Applications: The bio-glue has numerous potential applications in the medical field, either as a patch that can be cut to desired sizes and applied to tissue surfaces or can be also used as an injectable solution for deeper injuries.

The bio-glue is double-layered hydrogel consisting of an alginate-polyacrylamide matrix supporting an adhesive layer that has positively-charged polymers protruding from its surface. It bonds to biological tissues via three mechanisms – electrostatic attraction to covalent bonds between neighbouring atoms, negatively charged cell surfaces and physical interpenetration. This bond makes the adhesive super strong. It is the combination of a very strong adhesive force and has ability to transfer and dissipate stress. It can bind to tissues with strength comparable to the body’s own resilient cartilage.

Scientists for first time edit genes of human embryos

✓ Scientists from Oregon Health and Science University, US for first time have successfully edited genes of human embryos to correct defective DNA that cause inherited diseases.
✓ They had used the CRISPR-Cas9 genome editing technology to alter human DNA in single-cell embryos, which allows specific sections of DNA to be altered or replaced.

Key Facts:
✓ In this experiment, scientists had used sperm donated from men who carried inherited disease mutations to demonstrate that the genes can be corrected. The one-celled embryos were created in the experiment, were never intended to be implanted into a womb and were only allowed to develop for a few days.
✓ They had used a process called “germline engineering” in which genetically modified organisms pass changes to their offspring to eradicate inherited disease. It allowed so-called permanent germline changes to pass down to any offspring.
The research holds great potential to avoid many genetic diseases, but has raised fears of “designer babies”. It is also considered as a milestone in journey for giving birth to the first genetically modified humans.

CRISPR-Cas9 genome editing technology CRISPR short form of clustered regularly interspaced short palindromic repeats. It allows scientists to selectively edit genome parts and replace them with new DNA stretches. CRISPR is a collection of DNA sequences that direct Cas9 where to cut and paste. Cas9 is an enzyme that can edit DNA, allowing the alteration of genetic patterns by genome modification. CRISPR-Cas9 technology has the potential to revolutionise the treatment of blood diseases, tumours and other genetic diseases.

Scientists discover smallest star known in the universe

Scientists from University of Cambridge, UK have discovered the smallest star in the universe. It has been named as EBLM J0555-57Ab. The star was identified by SuperWASP, a planet-finding experiment run by several universities. It was detected when it passed in front of its larger parent star, forming an eclipsing stellar binary system.

Key Facts:

- EBLM J0555-57Ab is located about 600 light years away. It is slightly larger than Saturn in size and may possibly have Earth-sized planets with liquid water in its orbit. It is likely as small as stars can possibly become, as it has just enough mass to enable the fusion of hydrogen nuclei into helium at its centre.
- The gravitational pull at EBLM J0555-57A’s stellar surface is about 300 times stronger than on Earth. It is likely colder than many of the gas giant exo-planets that have so far been identified. The discovery of EBLM J0555-57A also makes the best possible candidate for detecting Earth-sized planets which can have liquid water on their surfaces, such as TRAPPIST-1, an ultracool dwarf surrounded by seven temperate Earth-sized worlds.

SuperWASP

SuperWASP is the UK’s leading extra-solar planet detection programme. It is run by a consortium of eight academic institutions. It consists of two robotic observatories that operate continuously all year around, to cover both hemispheres of the sky.

The first robotic observatory, SuperWASP-North is located on La Palma Island (in Atlantic Ocean) amongst the Isaac Newton Group of telescopes (ING). The second observatory, SuperWASP-South is located at the site of the South African Astronomical Observatory (SAAO), Sutherland, South Africa.

The observatories each consist of eight wide-angle cameras that simultaneously monitor the sky for planetary transit events. These cameras can monitor millions of stars simultaneously to detect the rare transit events.
**US Navy tests world’s first Laser Weapons System**

- United States Navy successfully tested the world’s first-ever active Laser Weapons System (LaWS).
- In the test, the LaWS deployed aboard the USS Ponce amphibious transport ship was able to destroy a drone in flight and moving targets on the Persian Gulf. USS Ponce is first ship in the world to be deployed with such advanced weapons system.

**Key Facts**

- LaWS operates within an **invisible part of the electromagnetic spectrum**. It is absolutely silent and incredibly effective. It strikes are extremely accurate, silent and invisible.
- It is primarily intended to take on drones, aircraft, and small vessels that could be used in an attack.
- The system has special materials that **release photons at the speed of light**. It silently hits the target, burning it to a temperature of thousands of degrees. It can even target a single component of an enemy target and disable or destroy it as necessary.
- Each strike of the system travels 50,000 times the speed of an incoming ICBM (Intercontinental Ballistic Missile).
- It is a very versatile weapon that can be used against a variety of targets in air or surface targets or ground-based targets. Its precise nature can also limit collateral damage in wartime. Its cost per use is approximately $1 per shot. The system requires electrical power and a three-man team.
- US is also developing **second generation LaWS** system which is believed to be intended to take on faster targets such as incoming missiles.

**SOHUM: Indigenously developed low-cost hearing screening device for newborns launched**

The Union Ministry of Science and Technology has launched SOHUM, an indigenously developed low-cost hearing screening device for newborns. The innovative medical device has been developed by the School of International Biodesign (SIB) startup Sohum Innovation Labs India Pvt Ltd under Department of Biotechnology (DBT) supported (SIB).

**Features of SOHUM:**

- The Sohum aims to make this battery-operated non-invasive screening device available across the country to minimise or reverse the hearing loss damage. It is a low cost portable device which uses brain-stem auditory evoked response, a best screening choice recommended by the American Association of Pediatrics and National Health Services of UK.
- It measures auditory brain waves via three electrodes placed on the baby’s head. When stimulated, electrodes detect electrical responses generated by the brain’s auditory system. If there is no response, it indicates child cannot hear. Once it is detected at quite an early age, measures can be taken to prevent other problems such as impaired communication skills and even possible mental illness.
- It is battery operated device and is non-invasive, it doesn’t require babies to be sedated, which is risky, testing in process at present. It has in-built algorithm that filters out ambient noise from the test signal. This is important because health clinics can be crowded and noisy.

**School of International Biodesign:**

SIB is a flaghip Program of the DBT aimed to develop innovative and affordable medical devices as per India’s unmet clinical needs and to train the next generation of medical technology innovators in India.

It is implemented jointly at All India Institutes of Medical Sciences (AIIMS) and IIT Delhi in collaboration with International partners. Biotech Consortium India Limited manages techno-legal activities of the Program. It serves as a valuable contribution to the Make in India campaign of the Government.
**Indigenously developed S-band Doppler Weather Radar commissioned in Kochi**

- A state-of-the-art, indigenously developed S-band doppler weather radar (DWR) of India Meteorological Department (IMD) was commissioned at Palluruthy in West Kochi, Kerala.
- It has been manufactured by Bharat Electronics Limited (BEL) based on the indigenous technology provided by ISRO. It joins the latest in a chain of 27 such advanced radars already installed in various parts of the country.
- The S-band DWR is capable of predicting weather events such as storms and cyclones, other severe weather conditions occurring in 500-km radius from Kochi with increased accuracy.

**Doppler weather radar**

Doppler weather radar is an observational tool for monitoring and predicting severe weather events such as hailstorms, thunder storms, cyclones and tornados. It uses the **Doppler effect** by bouncing a microwave signal off a desired target to produce velocity data. This data helps in analyzing object’s motion by altered the frequency of the returned signal. It mainly gives information about wind velocity and also about precipitation.

**Doppler effect:** It is an increase (or decrease) in the frequency of sound, light, or other waves as the source and observer move towards (or away from) each other.

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**World’s first wind farm being built off Scotland coast**

The world’s first full-scale floating wind farm is being built off the coast of Scotland. The wind farm, known as **Hywind**, is a trial project which will bring power to 20,000 homes. The technology will allow wind power to be harvested in waters that are too deep for the existing bottom-standing turbines.

**Significance**

Unlike normal turbines, floating turbines are not attached to the seabed by foundations. Rather, they are attached by long mooring tethers, allowing them to be placed in deep water. Traditional fixed turbines work best at a depth of 20-50m on stationary base.

**Parameters of turbine**

The park will be around four square kilometers in size in deep sea. Each turbine in the park will be floating at a depth of between 95 and 120 metres. Each turbine tower, including the blades in the floating wind park is 175m high and weighs 11,500 tonnes. It uses a large buoy filled with iron ore to weight the base to keep it upright. The turbines also make use of new blade technology, which twists the blades in order to lessen the impact of wind, waves and currents to hold turbine tower upright.

**Benefits**

The turbines in the floating wind farm can operate in water up to a kilometre deep. The power output is also larger than power generation from current stationary turbines. This revolutionary tech development project will demonstrate workability of floating wind farm technology in open sea conditions and also help to bring costs down.
New drugs needed against hard-to-treat gonorrhoea: UN

Antibiotic resistance is making gonorrhea harder and sometimes even impossible to treat, according to a new warning from the World Health Organization (WHO).

How bacteria become resistant?
Bacteria can become resistant to drugs when people take incorrect doses of antibiotics. Resistant strains can also be contracted directly from animals, water and air, or other people. When the most common antibiotics fail to work, more expensive types must be tried, resulting in longer illness and treatment.

Human antibodies produced in lab for first time

Scientists for the first time have produced human antibodies in the laboratory. They have developed revolutionary technique which can help in rapid development of new vaccines to treat a wide range of infectious diseases.

Antibodies
Antibodies mainly function in the humoral adaptive immune system by secreting antibodies to fight off infections caused by bacteria, viruses, and other invasive pathogens. They are produced by body’s B cells (B lymphocytes). When an individual B cell recognises a specific pathogen-derived antigen molecule, it proliferates and develops into plasma cells that secrete large amounts of antibody capable of binding to the antigen and fending off the infection.

Significance

 Researchers successfully demonstrated their approach using various bacterial and viral antigens, including the tetanus toxoid and proteins from several strains of influenza A.

 In each case, they were able to produce specific, high-affinity antibodies in just a few days. In some of the anti-influenza antibodies generated by the technique were able to neutralise multiple strains of the virus.

 They were able to generate anti-HIV antibodies from B cells isolated from HIV-free patients. This approach may help researchers to rapidly generate therapeutic antibodies for the treatment of infectious diseases and other conditions such as cancer.

Gonorrhoea disease (also called the clap) is caused by the bacterium Neisseria gonorrhoeae. It spreads by unprotected sex. Its symptoms include a thick green or yellow discharge from sexual organs, pain when urinating and bleeding between periods in case of women. Symptoms of infection include painful urination and abnormal discharge. In many cases, no symptoms are seen at all. Untreated gonorrhoea infection can lead to infertility in both genders, pelvic inflammatory disease in women and can be passed on to a child during pregnancy. According to WHO, about 78 million people pick up the sexually transmitted infection each year due to Gonorrhoea.
National Strategic Plan for Malaria Elimination

The Union Health Ministry and Family Welfare for first time has unveiled National Strategic Plan (NSP) for Malaria Elimination (2017-22). It has set malaria elimination deadline as 2027, three years ahead of the global deadline. The NSP is based on 2016 National Framework for Malaria Elimination framed with support of WHO’s Global Technical Strategy for Malaria, 2016-2030.

Features of the Plan:

The NSP is a year-wise roadmap for malaria elimination across the country. The plan aims to achieve universal case detection and treatment services in malaria endemic districts to ensure 100% diagnosis of all suspected cases, and full treatment of all confirmed cases. It seeks to maintain a malaria-free status for areas where transmission has been interrupted.

- **Categorisation of Districts:** The plan divides country into four categories, from 0 to 3 based on their annual parasite incidence (API). The first category, Zero has 75 districts having of API of malaria for the last three years. The Category 1 covers 448 districts, in which the API is less than 1 per 1,000 population.
- The Category 2 covers 48 districts, in which API is one and above, but less than 2 per 1,000 population. The Category 3 covers 107 districts, in which API of two and above per 1,000 population.
- **Targets:** The plan aims to eliminate malaria (zero indigenous cases) in all Category 1 and 2 districts by 2022. In Category 3, the target is bring remaining districts under a pre-elimination and elimination programme by 2022.
- **Four components, based on recommendations WHO:** Diagnosis and case management; surveillance and epidemic response; prevention — integrated vector management; cross-cutting interventions, which include communication, advocacy, R&D and other initiatives.
- **Funding:** The resources required for the elimination of malaria is around Rs 10,653.16 crore over a period of five years (2017-2022). These resources will be managed from government sources, international donors, and the corporate sector as part of corporate social responsibility (CSR).
- **Significance:** This is for the first time, the Union Health Ministry has come up with a roadmap for elimination of malaria in the country. Prior to it, effort was to “control” malaria under the National Vector Borne Disease Control Programme (NVBDC). The NSP lays down detailed strategy with operational guidelines for all states towards set targets. It has also given a detailed breakdown of annual budgetary requirements over five years.

Background:

- Malaria is a vector borne disease caused by parasitic protozoans belonging to the Plasmodium type. It is most commonly transmitted by an infected female Anopheles mosquito. According to the World Malaria Report 2016, India accounts for 89% of the incidence of malaria in the South-East Asia region.
- In India, malaria is caused by the parasites Plasmodium falciparum (PF), found more in the forest areas and Plasmodium Vivax (Pv), more common in the plains. Most malaria cases are mainly concentrated in tribal and remote areas of the country.
- The majority of malaria reporting districts are in India’s eastern and central parts. Six states — Odisha (40%), Jharkhand (20%), Chhattisgarh (20%), Meghalaya, Arunachal Pradesh and Mizoram (5-7%) report most of the malaria cases in India. These states, along with tribal areas of Madhya Pradesh and Maharashtra account for 90% of India’s malaria burden.

Ministry, NITI Aayog moot privatisation of select services in district hospitals

As a part of a radical ‘privatisation project’, the Health Ministry and the NITI Aayog have developed a framework to let private hospitals run select services within district hospitals, on a 30-year lease. The framework was prepared in consultation with the World Bank.

**What you need to know about the proposed framework?**

- As per the framework, the government will be allowing “a single private partner or a single consortium of private partners” to bid for space in district level hospitals, “especially in tier 2 & 3 cities.”
Under this Public Private Partnership (PPP), care for only three non-communicable diseases — cardiac disease, pulmonary disease, and cancer care — will be provided.

As per the draft model contract, private hospitals will bid for 30-year leases over portions of district hospital buildings to set up 50- or 100-bed hospitals in smaller towns across the country.

The State governments could lease up to five or six district hospitals within the State. Further, the State governments will give Viability Gap Funding (VGF), or one-time seed money, to private players to set up infrastructure within district hospitals.

The private parties and State health departments will share ambulance services, blood banks, and mortuary services.

**Concerns:**

- A major concern about the policy is that under ‘principles’ of the financial structure, the document states that “there will be no reserved beds or no quota of beds for free services” in these facilities.
- The policy document has also come under sharp criticism for the Ministry’s failure to consult with key stakeholders from civil society and academia.
- Another particularly disturbing suggestion is that only Below Poverty Line (BPL) patients and those in insurance schemes will be able to access free care.
- This would effectively exclude hundreds of millions of the Indian population from vital hospital services.

**Guidelines for implementation of Pradhan Mantri Matru Vandana Yojana**

- Draft guidelines for implementation of Pradhan Mantri Matru Vandana Yojana (PMMVY) have been prepared by the Ministry of Women and Child Development.
- The draft guidelines inter-alia provide Aadhaar linkage, Direct Benefit Transfer of Rs. 5000 in beneficiary’s bank/post office account in three instalments at the stage of early registration of pregnancy, after six months of pregnancy on at least one antenatal check-up and registration of child birth & first cycle of immunisation of the child. The scheme would benefit pregnant women and lactating mothers for the birth of their first live child.

**Features:**

- Providing the partial compensation to working women against their wage loss and ensure their proper rest nutrition.
- Improving the health of pregnant women and lactating mothers and reducing the effects of under-nutrition through cash incentives
- The scheme would be implemented by the Ministry of Women and Child Development.
  
  1st Installment: Rs. 1000 at the time of registration of pregnancy.
  2nd Installment: Rs 2,000 if they carry out at least one antenatal check-up after six months of pregnancy.
  3rd Installment: When the birth of child is registered and the child has its first cycle of vaccines, including BCG, OPV, DPT and hepatitis-B
- Pradhan Mantri Matritva Vandana Yojana (PMMVY) would not be applicable for the following category of pregnant women and lactating mothers
  1. Those who are in regular employment with central or state government or any public sector undertaking.
  2. Those who are the recipients of similar benefits under any other scheme or law.

**Pradhan Mantri Matru Vandana Yojana (PMMVY):**

Pradhan Mantri Matritva Vandana Yojana (PMMVY), previously Indira Gandhi Matritva Sahyog Yojana (IGMSY), is a maternity benefit program run by the government of India. It is a conditional cash transfer scheme for pregnant and lactating women of 19 years of age or above for first two live births. It provides a partial wage compensation to women for wage-loss during childbirth and childcare and to provide conditions for safe delivery and good nutrition and feeding practices. In 2013, the scheme was brought under the National Food Security Act, 2013 to implement the provision of cash maternity benefit of ₹6,000 stated in the Act. It is Centrally Sponsored Scheme under which the cost sharing ratio between the Centre and the States & UTs with Legislature is 60:40, for North-Eastern States & three Himalayan States, it is 90:10 and 100% Central assistance for Union Territories without Legislature.
Govt. panel to study cow derivatives

- The government has set up a 19-member panel to carry out what it says will be scientifically validated research on cow derivatives including its urine, and their benefits.
- The committee will select projects that can help scientifically validate the benefits of panchgavya — the concoction of cow dung, cow urine, milk, curd and ghee — in various spheres such as nutrition, health and agriculture.

Key facts:

- The government has given the project the acronym SVAROP, which stands for Scientific Validation and Research on Panchagavya, and says it is a “national programme” that’s being conducted by the Department of Science and Technology, Department of Biotechnology, and the Council for Scientific and Industrial Research (CSIR) of the Ministry of Science and Technology in collaboration with IIT-Delhi.
- This multi-disciplinary programme will involve participation of other related ministries, government departments, academic institutions, research laboratories, voluntary organisations and others to carry out research and development and also build capacities, and cover five thematic areas including scientific validation of uniqueness of indigenous cows.
- It will cover “scientific validation of ‘panchagavya’ for medicines and health, scientific validation of ‘panchagavya’ and its products for agriculture applications, scientific validation of ‘panchagavya’ for food and nutrition

Tamil Nadu reports first case of Zika virus

Tamil Nadu has reported its first case of Zika virus in a 27-year-old man from a village in Krishnagiri district. RT-PCR test conducted on patient’s blood, urine and throat samples were found to be positive for Zika. This is second case Zika reported in India. Earlier in May 2017, the World Health Organisation (WHO) confirmed the first cases of Zika in in Ahmedabad, Gujarat after three cases were detected.

About Zika virus
Zika virus is vector borne disease transmitted primarily by Aedes aegypti mosquitoes, the same mosquito that transmits dengue. It is also found that, sexual transmission of Zika virus disease is possible.

Threats: The virus is capable of causing serious birth defects i.e. neurological disorders and foetal deformation known as Microcephaly in which infants are born with abnormally smaller heads. Besides a possible link between the virus and Guillain-Barré syndrome (a condition in which the body’s immune system attacks part of the nervous system) is also suspected.

Treatment: There is no specific treatment or vaccine currently available to treat Zika. The best form of prevention is protection against mosquito bites and clearing stagnant water where mosquitoes breed.
Google’s machine-raised mosquitoes to shrink vector’s numbers

Google’s parent company Alphabet and scientists in the US have teamed up to release 20 million machine-raised mosquitoes to shrink the numbers of the disease-carrying ones.

- The project, called Debug Fresno, is being undertaken by Verily, a subsidiary of Alphabet, Google’s holding company. The goal is to cut the numbers of Aedes aegypti mosquitoes — the species responsible for spreading Zika, dengue and chikungunya.
- For 20 weeks, the company plans to release a million of the sterile, non-biting male mosquitoes in two neighbourhoods in Fresno county.
- The male mosquitoes are bred and infected with Wolbachia, a bacterium that is naturally found in at least 40% of all insect species.
- The bacterium used to sterilise mosquitoes “is not known” to infect humans. In a phenomenon called cytoplasmic incompatibility, matings between Wolbachia-infected males and uninfected females result in embryo lethality or low hatch rates.

Haryana government bans use of liquid nitrogen in food and drink

- The Haryana food and drugs administration department has banned flushing/mixing of liquid nitrogen with any drink or food article. The ban was imposed under section 34 of the Food Safety and Standards Act (FSS), 2006.
- The ban comes after a cocktail accident (due mixing of liquid nitrogen in cocktail) at Gurgaon pub in April 2016 that burnt a hole in a man’s stomach.
- Under this ban, any eatery found using liquid nitrogen with any drink or food will be booked under section 34 (i) and (ii) of the FSS Act, 2006. The eatery may also face closure and/or a penalty.

Harmful effects of liquid nitrogen:
According to medical experts, any drink or food article whose preparation involves flushing/mixing of liquid nitrogen is harmful for humans. It releases a large volume of gas as it evaporates, which can burst the stomach if consumed in a sufficiently large quantity.

Liquid nitrogen

Liquid nitrogen is a colourless liquid having a boiling point of -195.79 °C. It is used to instantly freeze food and drinks. It is used in bars to quickly freeze ingredients, chill glasses and provide a smoky effect to drinks and also in molecular gastronomy. It is also used to cool computers and in cryogenic medical procedures like removing cancerous tissues and warts by freezing them.
India ranks 23rd in second Global Cybersecurity Index (GCI) 2017

The UN telecommunications agency, International Telecommunication Union (ITU), recently released its second edition of the Global Cybersecurity Index (CGI) which ranks countries of the world depending on their national policy against cybercrime — which ascertains there cybersecurity commitment.

**Global Cybersecurity Index?**

- The Global Cybersecurity Index (GCI) is a multi-stakeholder initiative to measure the commitment of countries to cybersecurity. Cybersecurity has a wide field of application that cuts across many industries and sectors. Each country’s level of development will therefore be analyzed within five categories: Legal Measures, Technical Measures, Organizational Measures, Capacity Building and Cooperation.
- The index has placed India at a high 23rd position. India is ranked 23rd on the index with a score of 0.683 and has been listed in the “maturing” category.

India ranks 116 out of 157 nations on SDG index

- The SDG index, that assesses the performance of countries towards achieving the ambitious sustainable development goals (SDGs), has been released for the year 2017.
- Key facts on SDG index: The SDG Index and Dashboards Report produced by the Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung shows that world leaders need to strengthen their joint efforts to realise the 17 global goals.
- The SDG Index and Dashboard collect available data for 157 countries to assess where each country stands in 2017 with regard to achieving the SDGs. The SDG Index ranks countries based on their performance across the 17 Sustainable Development Goals.
- **Sweden leads the list, followed by Denmark and Finland.** Among the G7 countries, only Germany and France can be found among the top ten performers.
- The United States ranks 42nd on the Index, while Russia and China rank 62nd and 71st respectively.
- **India is ranked 116th on the index** with a score of 58.1, behind countries such as Nepal, Iran, Sri Lanka, Bhutan and China. Pakistan is ranked 122.
- **The countries which are closest to fulfilling the goals are not the biggest economies but comparably small, developed countries.**
- Many of the richest countries in the world are nowhere near achieving the global policy objectives but also deteriorate the implementation process for poorer countries because of negative spillover effects.
- One of the greatest obstacles to achieving the global goals for high-income countries are poor performances regarding sustainable consumption and production. All countries that score lowest on electronic-waste generation, for example, are high-income countries.
- Not only does a rising trend of nationalism and protectionism impede the implementation of the goals, but as the report shows, industrialised countries are not serving as role models.

**SDGs:** The SDGs are a set of 17 goals and 169 targets aimed at resolving global social, economic and environmental problems. SDGs replaced the Millennium Development Goals (MDGs) which were adopted in 2000. Aiming to encompass almost every aspect of human life, the main themes of the SDGs are ending poverty, tackling inequality and combating climate change.

India is world’s third-biggest beef exporter: OECD-FAO report

According to recently released OECD-FAO Agricultural Outlook 2017-2026 report, India is the world’s third-biggest exporter of beef. Brazil was ranked as the world’s top beef exporter followed by Australia. The report was released jointly by the Food and Agriculture Organisation (FAO) and the Organisation for Economic Cooperation (OECD).

**Key Highlights of Report**

- **India exported 1.56 million tonnes of beef in 2016.** It is expected to maintain its position as the third-largest beef exporter, accounting for 16% of global exports in 2026 by exporting 1.93 tonnes that year. India imported 363,000 tonnes of beef in 2016 and the amount was projected to stay the same over the decade.
- **The type of beef exported was not specified, but the exported meat appears to be mostly from buffaloes as the report has specified the animal for imports by Myanmar from India. It needs to be clarified whether the report classifies even buffalo meat as beef.**
- **The total world beef exports was 10.95 million tonnes in 2016 and it is expected to increase to 12.43 million tonnes by 2026.** Till 2015, India was the world’s largest exporter of beef and had extended its lead over the next highest exporter, Brazil.

India ranks third in global index of countries with most confidence in their government: OCED Report
India ranked third in the Organisation for Economic Co-operation and Development’s (OECD) Government at a Glance 2017 report. It states that Narendra Modi led NDA coalition has secured 73% trust of people, third highest in the world after Indonesia and Switzerland.

OECD’s Government at a Glance report presents an index of countries that trust their governments the most. It determines government’s trust levels by whether or not people consider their government stable and reliable, if it’s able to protect its citizens from risk and whether it can effectively deliver public services. The report cites data collected by Gallup World Poll (GWP), which collects evidence from perception surveys to measure the level of trust on an annual basis for OECD countries.

11 July: World Population Day

The World Population Day is observed across the world on July 11 to attention on the urgency and importance of population issue. Observance of the day aims at increase people's awareness on various population issues such as the importance of family planning, maternal health, gender equality, poverty and human rights.

2017 theme: “Family Planning- Empowering People, Developing Nations”. The theme highlights importance of family planning as it allows people to attain their desired number of children and determine the spacing of pregnancies.

Background
The World Population Day was established by the then Governing Council of the United Nations Development Programme (UNDP) in 1989. It was inspired by the public interest in Five Billion Day on July 11, 1987. On this date world’s approximate population had reached five billion people.

15 July: World Youth Skills Day

The World Youth Skills Day is observed globally on 15 July every year to raise awareness about the importance of investing in youth skills development. Observance of the day aims to create more awareness on training and the development of skills for the youth of today and also create better employment opportunities for the youth.

2017 Theme is “Skills for All”. It is aimed at creating awareness that everyone should have the opportunity to discover and develop their talents. It also spreads message of creating a more prosperous future through skills.

On the occasion, United Nations along with WorldSkills.org have organised campaigns #SkillsForAll and #WYSD. These campaigns aim to raise awareness about the importance of youth developing skills.

Background:
The United Nations General Assembly (UNGA) had established World Youth Skills Day in November 2014 to raise awareness about the importance of investing in youth skills development

28 July: World Hepatitis Day

- The World Hepatitis Day is being observed every year on July 28 around the world by World Health Organisation (WHO) to spread awareness about viral hepatitis. This year the theme of the Day is – “Eliminate Hepatitis”.
- The observance of the day seeks to encourage diagnosis, prevention and treatment of Hepatitis. Provide a single global platform to raise awareness about hepatitis and influence real change in disease prevention, testing and treatment

About World Hepatitis Day: The day is being observed since 2010. It is one of the 8 official global public health campaigns marked by the WHO. It was established by resolution of WHO passed in in May 2010. The date 28 July was chosen to mark the birth anniversary of Professor Baruch Blumberg who had discovered hepatitis B virus. He was awarded with the Nobel Prize in Physiology or Medicine (1976) for this discovery.
**HEPATITIS PREVENTION AND PROTECTION GUIDE**

**WORLD HEPATITIS DAY**

*Hepatitis*
- Hepatitis is a viral infection which causes inflammation in the liver. It is a group of infectious diseases known as Hepatitis A, B, C, D, and E. According to WHO, Hepatitis affects hundreds of millions of people worldwide, causing acute and chronic disease and killing close to 1.4 million people every year.

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**29 July: International Tiger Day**

- The International Tiger Day (also known as Global Tiger Day) is celebrated every year on 29 July to raise awareness for tiger conservation. The goal of observance of the day is to promote the protection and expansion of the wild tigers habitats and to gain support through awareness for tiger conservation.
- On this occasion, special programmes are being organized all over the globe by many international organisations including the WWF (World Wide Fund for Nature), the IFAW (International Fund for Animal Welfare) etc. organized events.

*The International Tiger Day was founded in 2010 at the St. Petersburg Tiger Summit. The summit had issued St. Petersburg Declaration on Tiger Conservation with an aim to double the big cat population by 2022. The tiger is the largest of the world’s big cats with its distinctive orange and black stripes and beautifully marked face. It is has been found that in the last century 97% of all wild tigers had disappeared due to many factors including habitat loss, hunting and poaching, climate change. According to WWF, only 3,890 tigers are left in the world, of them, India with more than 2500 tigers has the highest number.*

**July 30: World Day against Trafficking in Persons**

- The United Nations (UN) World Day against Trafficking in Persons is observed every year on July 30 to raise awareness of the plight of human trafficking victims, and promote and protect their rights.
- Human trafficking is the trade of humans, most commonly for the purpose of forced labour, commercial sexual exploitation or sexual slavery for the trafficker or others.
- The 2017 theme of the day is “Act to Protect and Assist Trafficked Persons”. It highlights the large mixed migration movements of refugees and migrants. It also puts the spotlight on the significant impact of conflict and natural disasters, as well as the resultant, multiple risks of human trafficking that many people face.
- It also seeks to addresses the key issue concerning trafficking responses i.e. most people are never identified as trafficking victims and therefore cannot access most of the assistance or protection provided.

*Background*  
The United Nations General Assembly (UNGA) had designated July 30 as the World Day against Trafficking in Persons by adopting resolution A/RES/68/192 in 2013. The resolution had declared that the observance of the day is necessary to raise awareness of the situation of victims of human trafficking and for the promotion and protection of their rights.
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