



BACKGROUNDER AUGUST 2016

Move over chemo, now harness the immune system to fight cancer

- Harnessing the immune system to fight cancer, long a medical dream, is becoming a reality
- Use of **immunotherapy** instead of traditional **chemotherapy** – Rather than attacking the cancer directly, as chemo does, immunotherapy tries to rally the patient's own immune system to fight the disease. This is a fundamental change in the way that we think about cancer therapy
- The immune system – a network of cells, tissues and biochemicals they secrete – defends the body against viruses, bacteria and other invaders. But cancer often finds ways to hide from the immune system or block its ability to fight.
- Immunotherapy tries to help the immune system recognise cancer as a threat, and attack it.

What is immunotherapy?

- A widely used type of immunotherapy involves drugs that free immune cells to fight cancer by blocking a mechanism – called a checkpoint – that cancer uses to shut down the immune system.
- These drugs, called **checkpoint inhibitors**, have been approved by the Food and Drug Administration to treat advanced melanoma
- Patients are clamouring for checkpoint drugs, including one, **Keytruda**, known to

many as “that Jimmy Carter drug” which, combined with surgery and radiation, has left the former president with no sign of recurrence even though melanoma had spread to his liver and brain.

NSEL settlement scandal is back in spotlight

The Enforcement Directorate on July 12, arrested prime accused in the Rs.5600 crore National Spot Exchange Limited (NSEL) scam and founder of Financial Technologies (India), Jignesh Shah under **Section 19** of the Prevention of Money Laundering Act (PMLA). Shah is the founder of FTIL, which owns 99.99 per cent in the now defunct NSEL

Background

- The NSEL (National spot Exchange Ltd) scam or NSEL fraud is a systematic and premeditated fraud perpetrated in the commodity market on Jignesh Shah owned National Spot Exchange (NSEL) which is based in Mumbai, India.
- The NSEL is a company promoted by Financial Technologies India Ltd and the NAFED (only 100 shares given for misusing the NAFED brand who was touted as a co-promoter).
- The NSEL scam was a Ponzi scheme and is estimated to be a Rs. 5600 crore (around US\$0.95 billion) fraud that came out to light after the National Spot Exchange failed to pay its investors in commodity pair contracts after 31 July 2013.

- 13000 investors from India lost about Indian Rupees 5600 Crores when the fraud was discovered and it was found that NSEL had neither the money nor the stocks to pay them back.
- The abrupt suspension in trading activities was triggered by a government directive after it was found that the spot exchange was offering so-called paired contracts.
- In the days to come it emerged that the exchange was in the midst of a huge settlement scam with hardly any commodity to settle the contracts.
- Spot exchanges were allowed to conduct forward trading in one-day contracts (where an individual can keep the contract open for two days), through a special Government notification in early 2008.
- NSEL used this exemption to launch one-day forward contracts with a settlement cycle of 20-30 days.
- But this exemption on forward trades came with the condition that the respective exchanges should not allow short selling.

Two Legal Battles

What's at the core of the problem?

- A product that wasn't approved by the government.
- A spot exchange is not supposed to offer forward contracts, but NSEL, it is now widely believed, offered 20-25 day (and some say 40-day) forward contracts.
- Worse, there have been reports that some of these contracts are so-called "naked" contracts – which means there is no underlying commodity.
- Stakeholders – FTIL, NSEL, investor associations, defaulters, brokerages along with the government and its probe agencies.
- The Mumbai Police EOW has also attached assets worth around Rs.5,000 crore of the defaulting trading members. EOW sent a notice to FTIL for freezing all its assets. FTIL has challenged the notice in the Mumbai high court but is yet to get a stay against it.
- Investor associations have focused their action around two legal battles aimed primarily at FTIL.

What's the fear?

That there is no underlying commodity is the fear. NSEL says it will sell the commodity and meet its payment obligations, but what if there are no commodities.

Surely, there are warehouse receipts?

Yes, but these have been issued by a group company and there's no clarity on the presence of commodities.

How were forward trades allowed in a spot market?

Solution 1 – NSEL-FTIL merger

- The investor associations are well aware that recovering the money from the defaulters by way of court decrees and injunctions will be a long-drawn affair and so have smartly lobbied for the merger of the defunct exchange with its cash-rich parent entity FTIL.
- The merger would force FTIL to assume all the liabilities of the Mumbai-based spot exchange. The merger would also make FTIL a party to the ongoing litigations involving NSEL.
- Investor groups tasted success in October 2014 when the Ministry of Corporate Affairs (MCA) issued a draft order proposing to

merge NSEL with FTIL. The final order was issued in February this year.

Solution 2 – Supersede FTIL

- The other case, which the investor associations are strongly pursuing, is about superseding the board of FTIL so that the government can appoint their own nominees to manage the company's operations.
- The case is being heard at the Company Law Board (CLB) in New Delhi.

FTIL's response

- The merger is easily said than done. FTIL has challenged the forced merger order at the Mumbai High Court, questioning the rationale of "public interest" put forth by the government while invoking Section 396 of the Companies Act, 1956.
- FTIL has been arguing that attempt to supersede the board is a clear sign that the government does not want any kind of opposition to FTIL-NSEL merger.

Kudankulam plant safest in the world, says Russian official

The Kudankulam Nuclear Power Plant (KKNPP) is the first in the world to have post-Fukushima safety enhancement requirements implemented and operated successfully

While Unit 1 at Kudankulam is functional and producing electricity after initial hiccups, Unit 2 had attained criticality on July 10 and is planned to be connected to the grid in August.

Safety Features

- There are a number of advanced active and passive safety systems which ensure unprecedented design-level nuclear and ecological safety of the plant

- Double localising and protective containment, passive heat removal system from reactor plant automatically, core catcher, and closed industrial water intake are some of the safety features incorporated.

- The reactor is protected from the impact of any earthquake, tsunami, tornado and hurricane.

- Sea Water

- Given that a large amount of seawater is drawn in to cool the reactors, measures have been taken to preserve the biological diversity of the Mannar Bay adjacent to Kudankulam.

- Seawater is supplied from the so-called "bucket" constructed in the sea into the special facilities and systems which ensure that fish and plankton return to sea.

India and Russian Nuclear Cooperation

- As part of India-Russia nuclear cooperation, the Rosatom state nuclear corporation is scheduled to construct six units of VVER-1000 light-water reactors at Kudankulam.

- In December 2014, both sides announced a decision for the construction of at least 12 more units in India.

- On India's request, additional safety measures are being enforced in Units 3 and 4 to withstand even higher seismic, climatic and technical impact

- On Units 5 and 6, in November 2015, Russia submitted the technical-commercial offer and their design had been agreed upon.

- In February, a road map for construction of Units 5 and 6 prior to the General Framework Agreement (GFA) has been signed. The GFA is expected to be signed in autumn this year

- Russia is awaiting India's decision on another site for setting up additional reactors.

NDRF rescues 10,000 people

Over 10,000 people have been rescued from the flood-hit parts of the country, including Assam and Bihar

¶ Forty-four self-contained rescue teams have been pre-positioned to assist the State governments in rescue and relief. Twelve flood rescue teams are engaged in relief and rescue in Assam

¶ So far, over 10,000 people had been evacuated nationwide this monsoon.

- In addition to the rescue work, NDRF teams established medical camps in Assam and Bihar and provided medical care to 1,233 persons.

What is National Disaster Response Force(NDRF) ?

- Two national calamities in quick succession in the form of Orissa Super Cyclone (1999) and Gujarat Earthquake (2001) brought about the realization of the need of having a specialist response mechanism at National Level to effectively respond to disasters.
- This realization led to the enactment of the DM Act on 26 Dec 2005. The NDMA was constituted to lay down the policies, plans and guidelines for disaster management.
- The DM Act has made the statutory provisions for constitution of National Disaster Response Force (NDRF) for the purpose of specialized response to natural and man-made disasters. Accordingly, in 2006 NDRF was constituted with 08 Bns (02 Bn each from BSF, CRPF, ITBP and CISF). As on date NDRF is having strength of 10 Bns

Role and Mandate of NDRF

- Specialized response during disasters
- Proactive deployment during impending disaster situations
- Acquire and continually upgrade its own training and skills
- Liaison, Reconnaissance, Rehearsals and Mock Drills
- Impart basic and operational level training to State Response Forces (Police, Civil Defence and Home Guards)
- Vis-à-vis Community- All NDRF Bns are actively engaged in various:
 - Community Capacity Building Programme
 - Public Awareness Campaign
 - Exhibitions : Posters, Pamphlets, literatures

Uniqueness of NDRF

- The only dedicated disaster response force of the world.
- The only agency with comprehensive response capabilities having multi-disciplinary and multi-skilled, high-tech, stand alone nature.
- Experienced paramilitary personnel specially trained and equipped for disaster response.
- Capabilities for undertaking disaster response, prevention, mitigation and capacity building.

Buddhist remains unearthed in A.P.

- Buddhist remains on a mound called 'Ernamma Pallu Dibba' behind the Zilla

Parishad High School at Ghantasala in Krishna district were unearthed on Sunday.

- limestone pillars carved with half-lotus medallions, two limestone panels and a fragment of a Buddha image were visible
- These remains, basing on the style of art and architecture are datable to the 3rd Century AD – i.e., Ikshwaku times

Background

- Emergence of Buddhism and Jainism helped in the development of early architectural style.
- Buddha's burial mounds and places of major events in his life became important landmarks of the significant architectural buildings in the country. These became important sites for Buddha's order of monks and nuns – the sangha.
- Monasteries (viharas), and centres of preaching, teaching and learning came up at such places. Congregational halls (chaitya) for teaching and interaction between the common people and the monks were also built up.
- From now on religion began to influence architecture. While Buddhists and Jains began to build stupas, Viharas and Chaityas, the first temple building activity started during the Gupta rule.

Salient features of Buddhist Stupa

The Buddhist Stupas were built at places where Buddha's remains were preserved and at the major sites where important events in Buddha's life took place. Stupas were built of huge mounds of mud, enclosed in carefully burnt small standard bricks.

- The Buddhist Stupa is a form of architecture, comprising a hemispherical dome, a solid structure into which one cannot enter.

- The stupa is a glorified, beautified, enlarged funerary mound: what was once the resting place of the bones and ashes of a holy man.

- Tradition has it that after the great demise of Lord Buddha, Emperor Ashoka decided to construct a large number of stupas throughout his dominion in memory of the Master and enshrine in them relics such as pieces of bones, teeth, hair etc., over which the Stupas were constructed.

- Originally the stupa was made of bricks and surrounded by a wooden railing.

- The existing stupa at Sanchi encloses the original stupa and has been enlarged and enclosed within the stone railing or balustrade, when stone was adopted in the place of wood.

- To the stupa which consisted of a domical structure, a base, sometimes circular, sometimes square, was added in the 1st century B.C., a circumambulatory path as well as the stone railing with four elegantly carved gateways in the four cardinal directions.

- In place of the original wooden umbrella, which was put up to signify the stupa represented and was built over the ashes of the Lord or his immediate disciples, a sign of royalty and dignity, developed in the course of time an interesting composition on top of the dome, the Harmika; a square Buddhist railing from which rises the shaft that holds the imperial umbrella, sometimes single and later on multiplied to three or even more, diminishing in size as they go upwards.

- The Sanchi Stupa has a diameter of 1202 and a height of 542 . About these gateways one thing stands that most of early Indian architecture was of wood and timber and that these are true imitations in stone of early wooden construction.

- One was built at his birthplace Lumbini; the second at Gaya where he attained enlightenment under the Bodhi Tree, the third at Sarnath where he gave his first sermon and the fourth at Kushinagar where he passed away attaining Mahaparinirvana at the age of eighty.

Architectural elements of excavated caves

- The excavated cave is the magnificent prayer hall or Chaitya is found at **Karle** in the **Poona**
- This has been excavated from the living rock and is unparalleled for its lofty and elevated impression. The size is truly stupendous.
- With well proportioned great and bulky pillars, carrying capitals of great originality holding up a vaulted roof that has real rafters of timber inserted into it, a ribbing inherited and copied from wooden structure.
- The columns are strong and bulky, surmounted by sculptured capitals. In the far distance there is a stupa with a wooden umbrella on top and astonishingly the original wood has survived unharmed to this date

Railings and Gateways

- The railing and gateways at Bharhut, Sanchi and Bodh Gaya are the most famous in the north and at Amravati and Nagarjunakonda in the South.
- Upright pillars and cross bars, based on wooden construction, were made and provided the occasion for some of the finest low relief carvings to be found anywhere in Indian art.
- On these surfaces are carved the favourite symbols of Buddhism, the lotus, elephant, bull, lion and horse and some of the Jataka stories of the previous births of Buddha, depicted in low relief with such exuberant

details that they are considered a landmark in the story of Indian art.

NASA to explore asteroid Benu during its close encounter with Earth

A near-Earth asteroid that is coming towards our planet after being dislodged by a gravitational pull can indeed strike us and cause massive destruction, but according to experts, it has a only a one in 2,700 chances of hitting.

Such an event will not take place for 150 years and the people living in the year 2135 would know whether the asteroid named Benu posed an actual threat to hit Earth

OSIRIS-REx Mission

- It is headed by NASA and the University of Arizona, plans to launch an unmanned spacecraft on September 8 in efforts to reach Benu in August 2018.
- OSIRIS-REx will launch from **Cape Canaveral, Florida**, on an Atlas V 411 rocket
- In August 2018, OSIRIS-REx's approach to Benu will begin. It will use an array of small rocket thrusters to match the velocity of Benu.
- The spacecraft will begin a detailed survey of the asteroid two months after slowing to encounter Benu. After the selection of the final site, the spacecraft will briefly touch the surface of Benu to retrieve a sample
- The sampling arm will make contact with the surface for about five seconds, during which it will release a burst of nitrogen gas. This will cause rocks and surface material to be stirred up and captured in the sampler head
- In March 2021, the window for departure from the asteroid will open and OSIRIS-REx will begin its return journey to Earth,

arriving two and a half years later in September 2023

What are asteroids?

- Asteroids are small, airless rocky worlds revolving around the sun that are too small to be called planets. They are also known as planetoids or minor planets.
- In total, the mass of all the asteroids is less than that of Earth's moon. But despite their size, asteroids can be dangerous. Many have hit Earth in the past, and more will crash into our planet in the future.

What Are The Differences Between An Asteroid, Comet, Meteoroid, Meteor and Meteorite?

- Asteroid: A relatively small, inactive, rocky body orbiting the Sun.
- Comet: A relatively small, at times active, object whose ices can vaporize in sunlight forming an atmosphere (coma) of dust and gas and, sometimes, a tail of dust and/or gas.
- Meteoroid: A small particle from a comet or asteroid orbiting the Sun.
- Meteor: The light phenomena which results when a meteoroid enters the Earth's atmosphere and vaporizes; a shooting star.
- Meteorite: A meteoroid that survives its passage through the Earth's atmosphere and lands upon the Earth's surface.

Where asteroids are located?

- Most asteroids lie in a vast **ring** between the orbits of Mars and Jupiter.
- Not everything in the main belt is an asteroid – for instance, **comets** have recently been discovered there, and **Ceres**, once thought of only as an asteroid, is now also considered a dwarf planet.

- Many asteroids lie **outside** the main belt. For instance, a number of asteroids called Trojans lie along Jupiter's orbital path.
- Three groups – Atens, Amors, and Apollos – known as near-Earth asteroids orbit in the inner solar system and sometimes cross the path of Mars and Earth.

Human Exploration of Asteroids

- The first spacecraft to take close-up images of asteroids was NASA's **Galileo** in 1991, which also discovered the first moon to orbit an asteroid in 1994.
- In 2001, after NASA's **NEAR spacecraft** intensely studied the near-earth asteroid **Eros** for more than a year from orbit, mission controllers decided to try and land the spacecraft. Although it wasn't designed for landing, NEAR successfully touched down, setting the record as the first to successfully land on an asteroid.
- In **2006**, Japan's **Hayabusa** became the first spacecraft to land on and take off from an asteroid. It returned to Earth in June 2010, and the samples it recovered are currently under study.
- NASA's **Dawn mission**, launched in 2007, began exploring **Vesta** in 2011. After a year, it left the asteroid for a trip to **Ceres**, with a planned arrival time of 2015. Dawn was the first spacecraft to visit Vesta, and will also be the first to explore Ceres.
- In 2012, a company called **Planetary Resources**, Inc. announced plans to eventually send a mission to a space rock to extract water and mine the asteroid for precious metals. Since then, NASA has begun to work on plans for its own asteroid-capture mission.

Bill to amend Sarfaesi, debt recovery tribunal Acts cleared by Lok Sabha

In an important step aimed to resolve bad loans, the Lok Sabha on Monday passed a bill to amend the existing Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, and the debt recovery tribunal (DRT) Act.

The amendments are aimed at

- faster recovery and resolution of bad debts by banks and financial institutions
- making it easier for asset reconstruction companies (ARCs) to function.
- put in place an enabling infrastructure to effectively deal with non-performing assets in the Indian banking system along with the new bankruptcy law which came into effect earlier this year

Enforcement of Security Interest and Recovery of Debts Laws and Miscellaneous Provisions (Amendment) Bill, 2016

- The government had introduced the Bill in May. The bill was referred to a joint Parliament committee which submitted its report last month. The bill will amend four acts – SARFAESI Act, 2002, the Recovery of Debts due to Banks and Financial Institutions Act, 1993, the Indian Stamp Act, 1899 and the Depositories Act, 1996.
- The bill will now go to the Rajya Sabha for its approval. The government has accepted all the recommendations of the joint committee.
- The bankruptcy law is now becoming operational. One of the big challenges we face is the enforcement of interest and recovery of bad debts. Securitization law and DRT law need to be amended for quick disposal of disputes
- DRTs were envisaged as an alternative to civil courts and for ensuring quick disposal. But things need to move faster. Procedures

in front of DRTs cannot be similar to civil courts

Background

- Indian banks have been under stress with many of them reporting losses and surge in non-performing assets (NPAs) after the Reserve Bank of India (RBI) pushed lenders to classify visibly stressed assets as NPAs after an asset quality review in 2015-16.
- Total stressed assets of state-run banks as of 31 March were at 14.5% of total advances, and according to recent report released by RBI, this may increase further.
- The gross non-performing asset (NPA) ratio of state-run banks may rise to 10.1% by March 2017 from 9.6% as of March 2016, RBI's financial stability report said, warning that under a severe stress scenario, it may rise to 11% by March 2017.
- Flaws in the existing recovery process have added to the problem of bad loans. For instance, more than 70,000 cases are pending before DRTs.

Salient Features of the Bill

- The bill gives RBI powers to audit and inspect ARCs and the freedom to remove the chairman or any director and appoint central bank officials to its board. The central bank will be empowered to impose penalties for non-compliance with its directives, and regulate the fees charged by these companies to banks at the time of acquiring such assets.
- The bill will also pave the way for the sponsor of an ARC to hold up to 100% stake. It will also enable non-institutional investors to invest in security receipts issued by ARCs and mandate a timeline for possession of secured assets.
- To be sure, RBI already regulates these entities, but the bill expands the regulator's

powers. It also increases the penalty amount that can be levied by RBI to Rs.1 crore from Rs.5 lakh.

- The bill proposes to widen the scope of the registry that will house the central database of all loans against properties given by all lenders.
- It also proposes to bring hire purchase and financial lease under the ambit of the Sarfaesi Act, and enable secured creditors to take over a company and restore its business on acquisition of controlling interest in the borrower company.
- As part of the overhaul of DRTs, the bill proposes to speed up the process of recovery and move towards online DRTs. To this effect, it proposes electronic filing of recovery applications, documents and written statements.
- DRTs will be the backbone of the bankruptcy code and deal with all insolvency proceedings involving individuals. The debtor will have to deposit 50% of the amount of debt due before filing an appeal at a DRT. It also seeks to make the process time-bound. A district magistrate has to clear an application by the creditor to take over possession of the collateral within 60 days.
- Political will is necessary and that seems to be missing. Bankruptcy and insolvency code has been passed. In spite of passage of laws, we have not seen much progress on either curbing black money or on NPAs of banks. Total stressed assets have crossed Rs.8 trillion
- The bill also proposes to amend the Indian Stamp Act to exempt deeds of assignment signed at the time of an ARC buying a loan from a bank from the levy of stamp duty.
- The amendments carry the work forward done in the insolvency and bankruptcy

code. Automation will help in increasing the pace of recovery, but this requires an investment. Currently, the problem is that many DRTs from time to time do not have presiding officers

More toilets only mean more scavengers, says Bezwada Wilson

The Ramon Magasaysay award has turned the spotlight on **manual scavengers** again but the shadow of Swacch Bharat looms over them, says one of this year's awardees, **Bezwada Wilson** – one of the founders and convener of the **Safai Karmachari Andolan**, a civil society movement that aims to eradicate manual scavenging.

Many of these toilets will be constructed in areas where sanitation facilities, including septic tanks and running water, are not available. Who will remove the waste there?

There are two lakh manual scavengers in India today, nearly all of them concentrated in North India.

The Safai Karmachari Andolan and its convener firmly believe the perpetuation of caste-based occupations in the country has trapped Dalits in demeaning occupations like manual scavenging.

Safai Karmachari Andolan (SKA)

- It is a civil society movement committed to the total eradication of manual scavenging and the rehabilitation of all scavengers for dignified occupations.
- In 1994, Bezwada helped found Safai Karmachari Andolan (SKA) along with S. R. Sankaran and Paul Diwakar.
- SKA's goal is to end the practice of manual scavenging and help those engaged in it find dignified work.

- SKA trains teams to work towards the elimination of manual scavenging in various Indian states. SKA initially worked on the state level, until 2003 when Bezwada and four other team members moved to Delhi to launch the Safai Karmachari Andolan nationwide.

Bezwada Wilson

- He is an Indian activist and one of the founders and National Convenor of the Safai Karmachari Andolan (SKA)
- He is well known as one of the leading figures of the Dalit movement in India.
- His work at SKA, a community-driven movement, has been recognized by the Ashoka Foundation which has nominated him a Senior Fellow.
- On July 27, 2016, he was honoured with the Ramon Magsaysay Award.

What is Manual Scavenging?

“Manual scavenger” means a person engaged in or employed for manually carrying human excreta and the expression “manual scavenging” shall be construed accordingly.

Statistics

- The practice of manual scavenging, officially banned since decades in India, continues with impunity in several States.
- The latest Socio-Economic Caste Census data reveals that 1, 80, 657 households are engaged in this degrading work for a livelihood.
- Maharashtra, with 63,713, tops the list with the largest number of manual scavenger households, followed by Madhya Pradesh, Uttar Pradesh, Tripura and Karnataka, as per Census data.

Measures taken by the government to end manual scavenging

- In 1908-81, the Ministry of Home Affairs took up the Centrally Sponsored Scheme for Liberation of Scavengers by way of conversion of existing dry latrines into low cost pour flush latrines and providing alternative employment to the unemployed scavengers as one of the measures for removal of Untouchability and providing financial assistance in selected towns.
- A Task Force constituted by the Planning Commission in July 1989 on the subject suggested for separate scheme for liberation and rehabilitation. It also explored the bases for the enactment of certain legislation to ban construction and continuation of dry latrines and prohibit the practice of manual scavenging.
- In 1992, the scheme of ‘Liberation of Scavengers’ was bifurcated.
- For conversion of dry latrines into water borne flush latrines, an ‘Integrated Low Cost Sanitation (ILCS) Scheme, was started.
- The **National Scheme for Liberation and Rehabilitation of Scavengers and their Dependents (NSLRS)** was started for providing alternative employment to the liberated scavengers and their dependents.
- Taking into consideration the seriousness of the problem and the requests of the State Governments, Parliament enacted the “**Employment of Manual Scavengers and Construction of Dry Latrines(Prohibition) Act, 1993**”. The Act, inter alia, provides that no person shall:-
 - engage in or employ for or permit to be engaged in or employed for any other person for manually carry human excreta; or
 - Construct or maintain a dry latrine

- Nevertheless, there were reports of existence of manual scavenging. The Houselisting and Housing Census, 2011 reported that there are about 26 lakh insanitary latrines in the country. Accordingly, the Parliament passed the '**Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**' (MS Act, 2013) which came into effect from 6th December, 2013
- The objectives of 2013 Act
- Eliminate the insanitary latrines.
- Prohibit:-
 - Employment as Manual Scavengers
 - Hazardous manual cleaning of sewer and septic tanks.
 - Survey of Manual Scavengers and their rehabilitation
- Main features of the 2013 Act
- Definitions of manual scavengers and insanitary latrines widened to cover not only dry latrines but other insanitary latrines as well.
- Offences under the Act are cognizable and non-bailable and attract stringent penalties.
- Vigilance/Monitoring Committee at sub-Division, District, State and Central Govt. levels.
- National Commission for Safai Karamcharis (NCSK) would, inter alia, monitor implementation of the Act and enquire into complaints regarding contravention of the provisions of the Act.
- Provision of construction of adequate number of sanitary community latrines in urban areas, within three years from the date of commencement of this Act to eliminate the practice of open defecation.

Constitutional safeguards:

- **Article 14:**
Equality before law. (Right to Equality)
- **Article 16 (2):**
Equality of opportunity in matters of public employment
- **Article 19 (1)(g) :**
Right to Freedom (Protection of certain rights regarding freedom of speech), to practice any profession, or to carry on any occupation, trade or business.
- **Article 21 :**
Protection of life and personal liberty
- **Article 23 :**
Prohibition of traffic in human beings and forced labor

Marans want money-laundering case shifted; ED opposes their bail

The Enforcement Directorate on Monday opposed the bail pleas of former Telecom Minister Dayanidhi Maran, his brother Kalanidhi Maran and the latter's wife, Kaveri, in a money laundering case connected with the Aircel-Maxis deal.

What is Money Laundering?

- Money is the prime reason for engaging in almost any type of criminal activity.
- Money-laundering is the method by which criminals disguise the illegal origins of their wealth and protect their asset bases, so as to avoid the suspicion of law enforcement agencies and prevent leaving a trail of incriminating evidence.
- The ability to prevent and detect money-laundering is a highly effective means of identifying criminals and terrorists and the

underlying activity from which money is derived.

How is money laundered?

Traditionally money laundering has been described as a process which takes place in three distinct stages.

1. Placement

the stage at which criminally derived funds are introduced in the financial system.

2. Layering

the substantive stage of the process in which the property is 'washed' and its ownership and source is disguised.

3. Integration

the final stage at which the 'laundered' property is re-introduced into the legitimate economy.

What does ED do?

Directorate of Enforcement is a specialized financial investigation agency under the Department of Revenue, Ministry of Finance, Government of India, which enforces the following laws: -

- **Foreign Exchange Management Act, 1999 (FEMA)** - A Civil Law, with officers empowered to conduct investigations into suspected contraventions of the Foreign Exchange Laws and Regulations, adjudicate, contraventions, and impose penalties on those adjudged to have contravened the law.
- **Prevention of Money Laundering Act, 2002 (PMLA)** - A Criminal Law, with the officers empowered to conduct investigations to trace assets derived out of the proceeds of crime, to provisionally attach/ confiscate the same, and to arrest and prosecute the offenders found to be involved in Money Laundering.

What is PMLA 2002?

- Prevention of Money Laundering Act, 2002 is an Act of the Parliament of India enacted to prevent money-laundering and to provide for confiscation of property derived from money-laundering.
- PMLA and the Rules notified there under came into force with effect from July 1, 2005.
- The Act and Rules notified thereunder impose obligation on banking companies, financial institutions and intermediaries to verify identity of clients, maintain records and furnish information

Norway considers a birthday gift for Finland

- Norway is pondering an unusual birthday gift for its neighbour Finland: an Arctic mountain peak.
- **Mount Halti** is the highest mountain in Finland, but its 4,478-foot summit is in Norway.
- To help commemorate the 100th anniversary of Finland's declaration of independence from Russia on December 6, 1917, a group of Norwegians is urging the government to move a point on its border with Finland some 490 feet to the north and 650 feet to the east.
- Halti's peak would become the highest point in Finland, surpassing a spur of the mountain that tops out at 4,344 feet.
- Norway's highest peak, **Galdhopiggen**, has an elevation of 8,100 feet, making it nearly twice as high as Mount Halti, which is not even among the top 200 of Norway's highest peaks.

First human genetic editing trial in China

Chinese scientists will perform the world's first **genetic editing** trial on humans this month, in an attempt to find a cure for lung cancer.

A group of oncologist at the West China Hospital of Sichuan University, Chengdu, will inject patients with cells that have been modified using the **CRISPR-Cas9 gene-editing technique**

What is CRISPR?

- CRISPR, short for clustered regularly interspaced short palindromic repeats, was named "2015 Breakthrough of the Year" by the U.S. journal *Science*.
- It allows scientists 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.

What doctors will do?

- Doctors will extract T cells, a type of immune cell, from the patient's blood and then knock out the gene that encodes the PD-1 protein, which normally limits the cell's capacity to launch an immune response.
- The edited cells will be multiplied in the lab before being reintroduced to the patients.
- 'Cancer-fighting army'
- This process will hopefully kick-start the T cells to launch an attack on the tumour cells.

- It is like building a cancer-fighting army outside the patient body

A total of 3,068 non-governmental organisations

- (NGOs) received foreign funding above Rs. 22,000 crore in 2014-15, according to government data presented in response to a question in Parliament.
- As much as Rs. 7,300 crore – or 33 per cent of the total – went to NGOs based in Delhi and Tamil Nadu alone.
- In fact, 80 per cent of this funding went to NGOs based in seven States – Delhi, Andhra Pradesh, Maharashtra, Kerala, Tamil Nadu, Karnataka and West Bengal.
- As of July 2016, 33,091 NGOs were registered under the Foreign Contribution Regulation Act, which regulates foreign funding to these bodies.

Background

- As many as 14,222 NGOs were barred from receiving foreign funds in the past four years for violating norms
- The Ministry of Home Affairs is mandated to administer the Foreign Contribution (Regulation) Act, 2010, for regulating the receipt and utilisation of foreign contribution by the associations.
- A 'person', as defined in Section 2(1)(m) with the exclusion of those mentioned in Section 3 of FCRA, 2010, having a definite cultural, economic, educational, religious or social programme can receive foreign contribution after it obtains the prior permission of the Central Government, or gets itself registered with the Central Government.

IBM's technology may help detect cancer early

Scientists at IBM have developed a new lab-on-a-chip technology that can, for the first time, separate biological particles at the nanoscale and could help detect diseases such as cancer before symptoms appear.

- Researchers showed size-based separation of **bioparticles** down to 20 nanometres (nm) in diameter, a scale that gives access to important particles such as DNA, viruses and exosomes.
- Once separated, these particles can be analysed to potentially unveil signs of disease even before patients experience any physical symptoms and when the outcome from treatment is most positive.
- Until now, the smallest bioparticle that could be separated by size with on-chip technologies was about 50 times or larger, for example, separation of circulating tumour cells from other biological components.
- **Exosomes** are increasingly being viewed as **biomarkers** for the diagnosis and prognosis of malignant tumours. They are released in easily accessible bodily fluids such as saliva, urine or blood. They represent a precious biomedical tool as they can be used in the context of less invasive liquid biopsies to unveil the origin and nature of a cancer.

Existing challenges

- Researchers targeted exosomes with their lab-on-chip technology as existing scientific techniques face challenges for separating and purifying exosomes in liquid biopsies.
- Exosomes range in size from 20-140nm and contain information about the health of the originating cell that they are shed from.

- A determination of the size, surface proteins and nucleic acid cargo carried by exosomes can give essential information about the presence and state of developing cancer and other diseases.
- Researchers showed they could separate and detect particles as small as 20 nm from smaller particles, that exosomes of size 100 nm and larger could be separated from smaller ones, and separation can take place in spite of diffusion, a hallmark of particle dynamics at these small scales.

Sorting bioparticles at the nanoscale

Lab-on-a-chip technologies have become an incredibly helpful tool for physicians as they can be significantly faster, portable, easy to use and require less sample volume to help detect diseases.

The goal is to shrink down to a single silicon chip all of the processes necessary to analyze a disease that would normally be carried out in a full-scale biochemistry lab.

What is nano-DLD?

- Nanoscale deterministic lateral displacement
- Using a technology called nanoscale deterministic lateral displacement, or nano-DLD allows a liquid sample to be passed, in continuous flow, through a silicon chip containing an asymmetric pillar array
- This array allows the system to sort a microscopic waterfall of nanoparticles, separating particles by size down to tens of nanometers resolution.

Special status for Andhra Pradesh: MPs raise slogans

- The Lok Sabha was adjourned twice when members from the Yuvajana Sramika Rythu Congress Party (YSRCP) and Telugu Desam Party raised slogans demanding special status for A.P.

- Finance Minister Arun Jaitley assured them that the government was looking at their demand. "Some members have concerns over particular issues. The Government stands by its commitment. We are trying to find a solution to these issues," Mr. Jaitley said.

Background

- Andhra Pradesh is asking for Special Category Status not Special Status, there's a big difference between Special Status and Special Category Status.
- Special Status** is guaranteed by the Constitution of India through an Act passed by the two-third majority in both houses of the Parliament (example - J&K)
- Special Category Status(SCS)** is granted by the National Development Council, an administrative body of the government.
- Special category status is usually based on the recommendations of the National Development Council (NDC).

What are the parameters?

- Low resource base, hilly & difficult terrain
- Low population density or sizeable share of tribal population
- Backwardness, border states/ sharing the international border
- Economic & infrastructural backwardness
- Non-viable nature of state finances

Which States are receiving it right now?

Assam, Jammu and Kashmir, Nagaland, Arunachal Pradesh, Manipur, Sikkim, Himachal Pradesh, Meghalaya, Tripura, Uttarakhand and Mizoram. (Total 11)

What are the benefits which states get?

- The Planning Commission allocates funds to states through central assistance for state plans. Central assistance can be broadly split into three components
 - Normal Central Assistance (NCA)
 - Additional Central Assistance (ACA)
 - Special Central Assistance (SCA)
- NCA, the main assistance for state plans, is split to favor special category states: **the 11 states get 30% of the total assistance** while the other states share the remaining 70%.
 - The nature of the assistance also varies for special category states; **NCA is split into 90% grants and 10% loans for special category states**, while the ratio between grants and loans is 30:70 for other states.
 - For allocation among special category states, there are no explicit criteria for distribution and funds are allocated on the basis of the state's plan size and previous plan expenditures.
- Allocation between non special category states is determined by the Gadgil Mukherjee formula which gives weight to population (60%), per capita income (25%), fiscal performance (7.5%) and special problems (7.5%).
- Special category states also receive specific assistance addressing features like hill areas, tribal sub-plans and border areas.
- Beyond additional plan resources, special category states can enjoy concessions in excise and customs duties, income tax rates and corporate tax rates as determined by the government.

AYUSH drugs to get trial guidelines

- To bring research on **Ayurvedic drugs** and formulations closer to practices in Western medicine, the Indian Council of Medical Research has released a set of guidelines concerning standards that must be adhered to in testing medicines from AYUSH (Ayurveda, Yoga, Unani, Siddha and Homeopathy) schools.
- The draft guidelines say that research on traditional and folk medicines and patented and proprietary varieties of traditional medicines involving human participants must be done using the **same ethical principles** under which drug trials are conducted.

IPR and patents

- If a mix of medicinal systems are involved, then there ought to be experts from each of those fields supervising trials and if a product deriving from traditional knowledge were to be commercialised, the "legitimate rights/share of the tribe or community from which the knowledge was gathered should be taken care of appropriately while applying for Intellectual Property Rights and patents for the product"
- The guidelines deal with emerging fields of research such as **synthetic biology** and **ethical rules** governing medical diagnostics, and specify that all participants be made aware of the risks and not be offered undue inducements to participate in the trial of a new drug.

Clinical trials

- India has several sets of guidelines governing the conduct of clinical trials and stem cell research that are updated from time to time. However, there has been little clarity on how Ayurvedic formulations and other traditional medicines ought to be

tested. This is a positive step and is important for traditional Indian formulations to be able to access international markets.

- A range of companies are employing new approaches such as genetic analysis or trying to determine the molecular basis of the effectiveness of traditional formulations.
- Among others, one of India's top pharmaceutical companies, Sun Pharma, has entered into a deal with the International Centre for Genetic Engineering and Biotechnology to develop a **herbal drug for dengue** earlier this year.
- The ICMR guidelines are not a precursor to a law though adherence to them is required by India's drug regulator to grant permission for trials.
- India has frequently seen controversies over the improper conduct of clinical trials and there is a proposed amendment to the Drug and Cosmetics Act that seeks to impose stricter penalties for those found violating clinical trial guidelines.

Steel industry seeks extension of MIP

Even as the steel industry is urging the Centre to continue the minimum import price (MIP) protection scheme to guard against increased imports, user-industries have started protesting against any extension of the scheme.

MIP scheme for Steel Industry

- The MIP scheme was introduced in February, 2016 for six months.
- Post-MIP, the industry has been able to marginally improve its viability after a prolonged period of subdued prices and eroded profit margins
- While MIP cannot possibly be an all-encompassing framework for a complete

turnaround of the Indian steel industry, it has provided a cushion against surging imports

- The Indian steel industry does not see MIP as a perpetual protectionist step, but as a necessary temporary measure that will allow time for recovery.
- The Indian steel industry's outstanding loan is estimated at Rs.3,00,000 crore, of which 35 per cent may be stressed.
- MIP was imposed on February 5, 2016 on 173 steel items covering both flat and long products.
- The accelerating imports at predatory prices from three steel-surplus Asian countries has been a major concern for the domestic industry since September 2014.
- Steel imports, which had peaked in July 2015 registering a 114.6 per cent increase year-on-year, started to decline around November 2015 (when a provisional safeguard duty was imposed). Post-MIP it has dropped in range of 24.6 per cent and 43.1 per cent in the first quarter of the current fiscal.

Anti-dumping duty

- India is expected to impose an anti-dumping duty of up to \$ 557 per tonne on imports of certain steel products from six countries.
- The Directorate General of Anti-Dumping and Allied Duties (DGAD), under the Commerce Ministry, has found that hot-rolled flat products of alloy or non-alloy steel have been exported to India from China, Japan, Korea, Russia, Brazil and Indonesia at "below-normal value".

Former BSF D-G to head Naga ceasefire monitoring group

Former Director General of BSF **D.K. Pathak** has been appointed as the new chairman of the Ceasefire Monitoring Group (CMG) that was created in 2001 to formalise a permanent peace accord with Naga groups.

This is the first time that a police officer has been appointed to the post, which has in the past been held by Army officials.

What is the function of Ceasefire Monitoring Group (CMG) ?

- Monitor the implementation of the agreed ground rules during the operation of ceasefire with the NSCN (Issac-Muivah), the NSCN (Khole-Kitovi) and the NSCN (Reformation) in Nagaland
- The main task of the CMG chairman is to help in creation of a conducive atmosphere by talking to the stakeholders on the ground that could pave way for a successful political negotiation and bring a final end to the decades-old insurgency problem in the northeastern border state.

Background

- The NSCN (Khaplang) first signed a bilateral ceasefire agreement with the Centre on April 28, **2001**, but it split in **2010**, into one led by Khole Konyak and Kitovi Zhimomi.
- The NSCN (K) split again in **2015**, forcing expelled members Wangtin and P. Tikhak to form the NSCN (R).
- The NSCN (K) unilaterally abrogated the ceasefire on March 27, 2015.

HOW OLD IS THE NAGA POLITICAL ISSUE?

- The British annexed Assam in 1826, and in 1881, the Naga Hills too became part of British India. The first sign of Naga resistance was seen in the formation of the Naga Club in 1918, which told the Simon Commission in 1929 “to leave us alone to determine for ourselves as in ancient times”.
- In 1946 came the Naga National Council (NNC), which, under the leadership of Angami Zapu Phizo, declared Nagaland an independent state on August 14, 1947.
- The NNC resolved to establish a “sovereign Naga state” and conducted a “referendum” in 1951, in which “99 per cent” supported an “independent” Nagaland.

WHEN DID THE ARMED MOVEMENT BEGIN?

- On March 22, 1952, Phizo formed the underground Naga Federal Government (NFG) and the Naga Federal Army (NFA).
- The Government of India sent in the Army to crush the insurgency and, in 1958, enacted the Armed Forces (Special Powers) Act.

WHEN DID THE PEACE EFFORTS START?

- Almost simultaneously with the resistance. On June 29, 1947, Assam Governor Sir Akbar Hyderi signed a 9-point agreement with moderates T Sakhrie and Aliba Imti, which was almost immediately rejected by Phizo.
- The Naga Hills, a district of Assam, was upgraded to a state in 1963, by also adding the Tuensang Tract that was then part of NEFA.

▪ In April the next year, Jai Prakash Narain, Assam Chief Minister Bimala Prasad Chaliha and Rev. Michael Scott formed a Peace Mission, and got the government and NNC to sign an agreement to suspend operations that September.

▪ But the NNC/NFG/NFA continued to indulge in violence, and after six rounds of talks, the Peace Mission was abandoned in 1967, and a massive counter-insurgency operation launched.

WHEN DID THE NSCN COME INTO BEING?

▪ On November 11, 1975, the government got a section of NNC leaders to sign the Shillong Accord, under which this section of NNC and NFG agreed to give up arms.

▪ A group of about 140 members led by Thuingaleng Muivah, who were at that time in China, refused to accept the Shillong Accord, and formed the National Socialist Council of Nagaland in 1980. Muivah also had Isak Chisi Swu and S S Khaplang with him.

▪ In 1988, the NSCN split into NSCN (IM) and NSCN (K) after a violent clash. While the NNC began to fade away, and Phizo died in London in 1991, the NSCN (IM) came to be seen as the “mother of all insurgencies” in the region.

WHAT DID THE NSCN (IM) WANT?

▪ A “Greater Nagalim” comprising “all contiguous Naga-inhabited areas”, along with Nagaland. That included several districts of Assam, Arunachal and Manipur, as also a large tract of Myanmar. The map of “Greater Nagalim” has about 1,20,000 sq km, while the state of Nagaland consists of 16,527 sq km.

▪ The claims have always kept Assam, Manipur and Arunachal Pradesh wary of a

peace settlement that might affect their territories.

- The Nagaland Assembly has endorsed the 'Greater Nagalim' demand – "Integration of all Naga-inhabited contiguous areas under one administrative umbrella" – as many as five times: in December 1964, August 1970, September 1994, December 2003 and as recently as on July 27, 2015.

WHEN DID NSCN (IM) JOIN PEACE TALKS?

- Muivah, Swu and other top NSCN (IM) leaders escaped to Thailand in the early 1990s. While Nagaland Governor M M Thomas, a Church leader from Kerala, extracted the first positive response from the NSCN(IM), Prime Minister P V Narasimha Rao met Muivah, Swu and others in Paris on June 15, 1995.
- In November 1995, then MoS (Home) Rajesh Pilot met them in Bangkok. Subsequently, Prime Minister H D Deve Gowda met them in Zurich on February 3, 1997, which was followed by meetings with officers in Geneva and Bangkok. Prime Minister Atal Bihari Vajpayee met them in Paris on September 30, 1998.
- The Government of India signed a ceasefire agreement with NSCN (IM) on July 25, 1997, which came into effect on August 1, 1997. Over 80 rounds of talks between the two sides were held subsequently.

CHRONICLES OF CONFLICT AND (ATTEMPTED) PEACE

- June 1947: Naga-Akbar Hydari Agreement
- Signed by The Naga National Convention and the Governor of Assam
- **THE AGREEMENT:** "That the right of the Nagas to develop themselves according to

their freely expressed wishes is recognized."

- **THE CATCH:** "The Governor of Assam as the Agent of the Government of the Indian Union will have a special responsibility for a period of 10 years to ensure the observance of the agreement, at the end of this period the Naga Council will be asked whether they require the above agreement to be extended for a further period or a new agreement regarding the future of Naga people arrived at."

July 1960: Sixteen-point Agreement with the Naga People's Convention

- Nagaland formed as a state, under the charge of the Ministry of External Affairs
- **THE AGREEMENT:** "No Act or law passed by the Union Parliament affecting the following provisions shall have legal force in the Nagaland unless specially applied to it by a majority vote of the Nagaland Legislative Assembly:
 - The Religious or Social Practices of the Nagas,
 - The Customary Laws and Procedure,
 - Civil and Criminal Justice so far as these concern decision according to the Naga Customary Law."
- **THE CATCH:** "The Naga leaders expressed the view that other Nagas inhabiting contiguous areas should be enabled to join the new state. It was pointed out to them on behalf of the Government of India that Article 3 and 4 of the Constitution provided for increasing the area of any state, but it was not possible for the Government of India to make any commitment in this regard at this stage".
- **1964: Ceasefire Agreement**

- **THE AGREEMENT:** “The Government of India welcomes the steps intended to bring about peace in Nagaland and with this object in view... they will depute representatives, with whom will be associated the representatives of the Government of Nagaland, to take part in talks with leaders of the underground. To facilitate these talks and taking note of the letter of August 10, 1964... it has been ordered that with effect from September 6, 1964, and for a period thereafter of one month at present, the security forces will not undertake: a. jungle operations; b. raiding of camps of the underground; c. patrolling beyond one thousand yards of Security posts; d. searching of villages; e. aerial action; f. arrests; and g. imposition of labour by way of punishment.
- **THE CATCH:** “Operations will be suspended as above on the understanding that the underground have accepted that during this period they will refrain from: (i) sniping and ambushing; (ii) imposition of fines; (iii) kidnapping and recruiting; (iv) sabotage activities; (v) raiding and firing on Security posts, towns and administrative centres; and (vi) moving with arms or in uniform in towns, villages and administrative centres, wherever there are Security posts and approaching within one thousand yards of Security posts.”
- **1975: Shillong Agreement**
- Between Nagaland Governor LP Singh and underground leaders
- **THE AGREEMENT:** “The representatives of the underground organisations conveyed their decision, of their own volition, to accept, without condition, the Constitution of India. It was agreed that the arms, now underground, would be brought out and deposited at appointed places. Details for giving effect of this agreement will be worked out between them and representatives of the Government, the security forces, and members of the Liaison Committee.”
- **THE CATCH:** “It was agreed that the representatives of the underground organisations should have reasonable time to formulate other issues for discussion for final settlement.”

Dwindling prey bad news for big cats, wolves, says study

- The world’s top land carnivores such as tigers, lions and jaguars are coming under threat as their prey dwindles in number, according to the first global study of feeding patterns.
- There are only **17 four-legged predators** – big cats, wolves and wild dogs – that weigh more than 15 kilos and whose diet is at least 70 per cent meat. Collectively, these fearsome carnivores feed on nearly 500 species, ranging in size from mice to buffaloes.
- But a **quarter** of these are themselves listed as **threatened** by the International Union for the Conservation of Nature (IUCN), which tracks the health of the planet’s fauna and flora.
- An expanding human footprint has also reduced the vast areas these wide-ranging hunters need to thrive – on average, it takes about 10,000 kilos of prey to support 90 kilos of carnivore biomass, whether a scrawny dingo or a strapping lion.

Heavy rainfall not linked to global warming, says IIT study

- A study carried out by researchers at IIT Bombay has found that extreme rainfall events over India do not have significant association with land surface air **temperature** over India and sea surface temperature over the central Indian Ocean.

- The results are contrary to the general notion that increased summer temperature is responsible for extreme summer monsoon rainfall events witnessed in some parts of India.
 - The claim is not really that climate change is not important. But the novel results indicate that the **local warming is not the controlling factor**.
 - The clues are in the rapid warming of the Indian Ocean and the changing roles of the Arabian Sea, Bay of Bengal and the Indian Ocean in monsoon variability and extremes. It is the nonlocal controls that are of great importance
 - The new generation climate model and historical simulations tend to over-estimate the association between extreme rainfall events and temperature.
 - We must be careful while using climate change for estimating future changes in extreme rainfall with increasing temperature over India and Central Indian Ocean.
- released by UNDP Bangladesh was at 142nd.
- The Bench sought to know the latest statistics on the exact number of deaths that have taken place in sterilisation camps across the country. It also asked Chhattisgarh government what actions it has taken after **13 women died** following botched sterilisation surgeries at state-run camps in Bilaspur.
 - As per data submitted by the ministry, no death occurred in 2015-16 in Chhattisgarh, which had reported the maximum – 19 – deaths in 2014-15. In all, **140 people** died in such surgeries across the country in **2014-15**, the government told the court.

Former Karnataka Lokayukta charged with abetting corruption, extortion

- A Special Investigation Team (SIT) of Karnataka Police Wednesday charged former Karnataka Lokayukta, **Justice Y Bhaskar Rao**, with abetting a **corruption and extortion racket** allegedly run from his office by his son Ashwin Rao during his tenure as Lokayukta between **2013 and 2015**.
 - Rao, who stepped down as the Lokayukta on December 7, 2015 after the Karnataka Assembly initiated an **impeachment motion**.
 - His son and more than a dozen other people, who allegedly carried out the extortion racket in the Lokayukta office, are in jail, awaiting trial.
- ### In botched sterilisation deaths, India matches Bangladesh
- Botched **sterilisation surgeries** in **2015-16** claimed **at least 113 lives**, and the death rate is on par with countries such as **Bangladesh** and **Indonesia**, the Centre has stated in an affidavit submitted in Supreme Court.
 - Indonesia and Bangladesh are much poorer than India in terms of per capita GDP and Purchasing Power Parity .
 - The IMF has ranked India at **seventh** on PPP; Indonesia and Bangladesh are at 16th and 44th positions, respectively.
 - India ranked 130 among 188 countries in 2014 in Human Development Report

Frequently Asked Questions (FAQs) on Goods and Services Tax (GST)

Question 1.

What is GST? How does it work?

- GST is one indirect tax for the whole nation, which will make India one unified common market.
- GST is a single tax on the supply of goods and services, right from the manufacturer to the consumer.
- Credits of input taxes paid at each stage will be available in the subsequent stage of value addition, which makes GST essentially a tax only on value addition at each stage.
- The final consumer will thus bear only the GST charged by the last dealer in the supply chain, with set-off benefits at all the previous stages.
- Removal of cascading: A system of seamless tax-credits throughout the value-chain, and across boundaries of States, would ensure that there is minimal cascading of taxes. This would reduce hidden costs of doing business.
- Improved competitiveness: Reduction in transaction costs of doing business would eventually lead to an improved competitiveness for the trade and industry.
- Gain to manufacturers and exporters: The subsuming of major Central and State taxes in GST, complete and comprehensive set-off of input goods and services and phasing out of Central Sales Tax (CST) would reduce the cost of locally manufactured goods and services. This will increase the competitiveness of Indian goods and services in the international market and give boost to Indian exports. The uniformity in tax rates and procedures across the country will also go a long way in reducing the compliance cost.

Question 2.

What are the benefits of GST?

- **For business and industry**
- **Easy compliance:** A robust and comprehensive IT system would be the foundation of the GST regime in India. Therefore, all tax payer services such as registrations, returns, payments, etc. would be available to the taxpayers online, which would make compliance easy and transparent.
- **Uniformity of tax rates and structures:** GST will ensure that indirect tax rates and structures are common across the country, thereby increasing certainty and ease of doing business. In other words, GST would make doing business in the country tax neutral, irrespective of the choice of place of doing business.
- **Simple and easy to administer:** Multiple indirect taxes at the Central and State levels are being replaced by GST. Backed with a robust end-to-end IT system, GST would be simpler and easier to administer than all other indirect taxes of the Centre and State levied so far.
- **Better controls on leakage:** GST will result in better tax compliance due to a robust IT infrastructure. Due to the seamless transfer of input tax credit from one stage to another in the chain of value addition, there is an in-built mechanism in the design of GST that would incentivize tax compliance by traders.
- **Higher revenue efficiency:** GST is expected to decrease the cost of collection of tax revenues of the Government, and will therefore, lead to higher revenue efficiency.

For Central and State Governments

For the consumer

- Single and transparent tax proportionate to the value of goods and services: Due to multiple indirect taxes being levied by the Centre and State, with incomplete or no input tax credits available at progressive stages of value addition, the cost of most goods and services in the country today are laden with many hidden taxes. Under GST, there would be only one tax from the manufacturer to the consumer, leading to transparency of taxes paid to the final consumer.
- Relief in overall tax burden: Because of efficiency gains and prevention of leakages, the overall tax burden on most commodities will come down, which will benefit consumers.

Question 3.

Which taxes at the Centre and State level are being subsumed into GST?

At the **Central** level, the following taxes are being subsumed:

- Central Excise Duty,
- Additional Excise Duty,
- Service Tax,
- Additional Customs Duty commonly known as Countervailing Duty, and
- Special Additional Duty of Customs.

At the State level, the following taxes are being subsumed:

- Subsuming of State Value Added Tax/Sales Tax,
- Entertainment Tax (other than the tax levied by the local bodies), Central Sales Tax

(levied by the Centre and collected by the States),

- Octroi and Entry tax,
- Purchase Tax,
- Luxury tax, and
- Taxes on lottery, betting and gambling.

Question 4.

What are the major chronological events that have led to the introduction of GST?

GST is being introduced in the country after a 13 year long journey since it was first discussed in the report of the Kelkar Task Force on indirect taxes. A brief chronology outlining the major milestones on the proposal for introduction of GST in India is as follows:

1. In 2003, the Kelkar Task Force on indirect tax had suggested a comprehensive Goods and Services Tax (GST) based on VAT principle.
2. A proposal to introduce a National level Goods and Services Tax (GST) by April 1, 2010 was first mooted in the Budget Speech for the financial year 2006-07.
3. Since the proposal involved reform/restructuring of not only indirect taxes levied by the Centre but also the States, the responsibility of preparing a Design and Road Map for the implementation of GST was assigned to the Empowered Committee of State Finance Ministers (EC).
4. Based on inputs from Govt of India and States, the EC released its First Discussion Paper on Goods and Services Tax in India in November, 2009.
5. In order to take the GST related work further, a Joint Working Group consisting of officers

from Central as well as State Government was constituted in September, 2009.

6. In order to amend the Constitution to enable introduction of GST, the Constitution (115th Amendment) Bill was introduced in the Lok Sabha in March 2011. As per the prescribed procedure, the Bill was referred to the Standing Committee on Finance of the Parliament for examination and report.
7. Meanwhile, in pursuance of the decision taken in a meeting between the Union Finance Minister and the Empowered Committee of State Finance Ministers on 8th November, 2012, a 'Committee on GST Design', consisting of the officials of the Government of India, State Governments and the Empowered Committee was constituted.
8. This Committee did a detailed discussion on GST design including the Constitution (115th) Amendment Bill and submitted its report in January, 2013. Based on this Report, the EC recommended certain changes in the Constitution Amendment Bill in their meeting at Bhubaneswar in January 2013.
9. The Empowered Committee in the Bhubaneswar meeting also decided to constitute three committees of officers to discuss and report on various aspects of GST as follows:-
 - (a) Committee on Place of Supply Rules and Revenue Neutral Rates;
 - (b) Committee on dual control, threshold and exemptions;
 - (c) Committee on IGST and GST on imports.
1. The Parliamentary Standing Committee submitted its Report in August, 2013 to the Lok Sabha. The recommendations of the Empowered Committee and the recommendations of the Parliamentary Standing Committee were examined in the Ministry in consultation with the Legislative Department. Most of the recommendations made by the Empowered Committee and the Parliamentary Standing Committee were accepted and the draft Amendment Bill was suitably revised.
2. The final draft Constitutional Amendment Bill incorporating the above stated changes were sent to the Empowered Committee for consideration in September 2013.
3. The EC once again made certain recommendations on the Bill after its meeting in Shillong in November 2013. Certain recommendations of the Empowered Committee were incorporated in the draft Constitution (115th Amendment) Bill. The revised draft was sent for consideration of the Empowered Committee in March, 2014.
4. The 115th Constitutional (Amendment) Bill, 2011, for the introduction of GST introduced in the Lok Sabha in March 2011 lapsed with the dissolution of the 15th Lok Sabha.
5. In June 2014, the draft Constitution Amendment Bill was sent to the Empowered Committee after approval of the new Government.
6. Based on a broad consensus reached with the Empowered Committee on the contours of the Bill, the Cabinet on 17.12.2014 approved the proposal for introduction of a Bill in the Parliament for amending the Constitution of India to facilitate the introduction of Goods and Services Tax (GST) in the country. The Bill was introduced in the Lok Sabha on 19.12.2014, and was passed by the Lok Sabha on 06.05.2015. It was then referred to the Select Committee of Rajya Sabha, which submitted its report on 22.07.2015.

Question 5.**How would GST be administered in India?**

Keeping in mind the federal structure of India, there will be two components of GST – Central GST (CGST) and State GST (SGST). Both Centre and States will simultaneously levy GST across the value chain. Tax will be levied on every supply of goods and services. Centre would levy and collect Central Goods and Services Tax (CGST), and States would levy and collect the State Goods and Services Tax (SGST) on all transactions within a State. The input tax credit of CGST would be available for discharging the CGST liability on the output at each stage. Similarly, the credit of SGST paid on inputs would be allowed for paying the SGST on output. No cross utilization of credit would be permitted.

Question 6.**How would a particular transaction of goods and services be taxed simultaneously under Central GST (CGST) and State GST (SGST)?**

The Central GST and the State GST would be levied simultaneously on every transaction of supply of goods and services except on exempted goods and services, goods which are outside the purview of GST and the transactions which are below the prescribed threshold limits. Further, both would be levied on the same price or value unlike State VAT which is levied on the value of the goods inclusive of Central Excise.

Question 7.**Will cross utilization of credits between goods and services be allowed under GST regime?**

Cross utilization of credit of CGST between goods and services would be allowed. Similarly, the facility of cross utilization of credit will be available in case of SGST. However, the cross utilization of CGST and SGST would not be allowed except in the case of inter-State supply of goods and services under the IGST model which is explained in answer to the next question.

Question 8.**How will be Inter-State Transactions of Goods and Services be taxed under GST in terms of IGST method?**

In case of inter-State transactions, the Centre would levy and collect the Integrated Goods and Services Tax (IGST) on all inter-State supplies of goods and services under Article 269A (1) of the Constitution. The IGST would roughly be equal to CGST plus SGST. The IGST mechanism has been designed to ensure seamless flow of input tax credit from one State to another. The inter-State seller would pay IGST on the sale of his goods to the Central Government after adjusting credit of IGST, CGST and SGST on his purchases (in that order). The exporting State will transfer to the Centre the credit of SGST used in payment of IGST. The importing dealer will claim credit of IGST while discharging his output tax liability (both CGST and SGST) in his own State. The Centre will transfer to the importing State the credit of IGST used in payment of SGST. Since GST is a destination-based tax, all SGST on the final product will ordinarily accrue to the consuming State.

Question 9.**How will IT be used for the implementation of GST?**

For the implementation of GST in the country, the Central and State Governments have jointly registered Goods and Services Tax Network

(GSTN) as a not-for-profit, non-Government Company to provide shared IT infrastructure and services to Central and State Governments, tax payers and other stakeholders. The key objectives of GSTN are to provide a standard and uniform interface to the taxpayers, and shared infrastructure and services to Central and State/UT governments.

GSTN is working on developing a state-of-the-art comprehensive IT infrastructure including the common GST portal providing frontend services of registration, returns and payments to all taxpayers, as well as the backend IT modules for certain States that include processing of returns, registrations, audits, assessments, appeals, etc. All States, accounting authorities, RBI and banks, are also preparing their IT infrastructure for the administration of GST.

There would no manual filing of returns. All taxes can also be paid online. All mismatched returns would be auto-generated, and there would be no need for manual interventions. Most returns would be self-assessed.

Question 10.

How will imports be taxed under GST?

Answer :The Additional Duty of Excise or CVD and the Special Additional Duty or SAD presently being levied on imports will be subsumed under GST. As per explanation to clause (1) of article 269A of the Constitution, IGST will be levied on all imports into the territory of India. Unlike in the present regime, the States where imported goods are consumed will now gain their share from this IGST paid on imported goods.

Question 11.

What are the major features of the Constitution (122nd Amendment) Bill, 2014?

The salient features of the Bill are as follows:

1. Conferring simultaneous power upon Parliament and the State Legislatures to make laws governing goods and services tax;
2. Subsuming of various Central indirect taxes and levies such as Central Excise Duty, Additional Excise Duties, Service Tax, Additional Customs Duty commonly known as Countervailing Duty, and Special Additional Duty of Customs;
3. Subsuming of State Value Added Tax/Sales Tax, Entertainment Tax (other than the tax levied by the local bodies), Central Sales Tax (levied by the Centre and collected by the States), Octroi and Entry tax, Purchase Tax, Luxury tax, and Taxes on lottery, betting and gambling;
4. Dispensing with the concept of 'declared goods of special importance' under the Constitution;
5. Levy of Integrated Goods and Services Tax on inter-State transactions of goods and services;
6. GST to be levied on all goods and services, except alcoholic liquor for human consumption. Petroleum and petroleum products shall be subject to the levy of GST on a later date notified on the recommendation of the Goods and Services Tax Council;
7. Compensation to the States for loss of revenue arising on account of implementation of the Goods and Services Tax for a period of five years;

8. Creation of Goods and Services Tax Council to examine issues relating to goods and services tax and make recommendations to the Union and the States on parameters like rates, taxes, cesses and surcharges to be subsumed, exemption list and threshold limits, Model GST laws, etc. The Council shall function under the Chairmanship of the Union Finance Minister and will have all the State Governments as Members.

Question 12.

What are the major features of the proposed registration procedures under GST?

The major features of the proposed registration procedures under GST are as follows:

1. **Existing dealers:** Existing VAT/Central excise/Service Tax payers will not have to apply afresh for registration under GST.
2. **New dealers:** Single application to be filed online for registration under GST.
3. The registration number will be PAN based and will serve the purpose for Centre and State.
1. Unified application to both tax authorities.
2. Each dealer to be given unique ID GSTIN.
3. Deemed approval within three days.
4. Post registration verification in risk based cases only.

Question 13.

What are the major features of the proposed returns filing procedures under GST?

The major features of the proposed returns filing procedures under GST are as follows:

1. **Common return** would serve the purpose of both Centre and State Government.
2. There are eight forms provided for in the GST business processes for filing for returns. Most of the average tax payers would be using only four forms for filing their returns. These are return for supplies, return for purchases, monthly returns and annual return.
3. **Small taxpayers:** Small taxpayers who have opted composition scheme shall have to file return on quarterly basis.
4. Filing of returns shall be completely online. All taxes can also be paid online.

Question 14.

What are the major features of the proposed payment procedures under GST?

The major features of the proposed payments procedures under GST are as follows:

1. Electronic payment process- no generation of paper at any stage
2. Single point interface for challan generation- GSTN
3. Ease of payment - payment can be made through online banking, Credit Card/Debit Card, NEFT/RTGS and through cheque/cash at the bank
4. Common challan form with auto-population feature
5. Use of single challan and single payment instrument
6. Common set of authorized banks
7. Common Accounting Codes

India to run short of high-tech minerals

- India will be woefully short of critical minerals necessary for developing clean-energy applications, infrastructure for its solar mission and for manufacturing high-technology products in the future.
- The country will be heavily dependent on **China** in the coming years to source these materials for its manufacturing sector, says a report commissioned by the Department of Science and Technology
- The study, conducted by the think-tank Council on Energy Environment and Water, identifies **12 minerals** out of 49 that were evaluated as ‘**most critical**’ for India’s manufacturing sector by **2030**.
- These are beryllium, chromium, germanium, limestone, niobium, graphite, rare earths, rhenium, strontium, tantalum and zirconium.
- Other minerals like limestone and graphite, while currently abundantly available in India, are deemed ‘critical’ because extractable resources could be scarce in the future.
- For others, the report says, India is 100 per cent import-dependent for **seven** out of 12 identified critical minerals and does not have any declared resources for them, except light rare-earths (found along with monazite sands) and beryllium.
- **Rare earths** are a group of 17 minerals necessary for making everything from nuclear reactors to flat-screen televisions, and, **China** currently controls **94 per cent** of their global supply.

Firming up trade

- India, therefore, will need to firm up **diplomatic trade** channels and long-term supply **contracts**

- Almost a quarter of India’s GDP now comes from manufacturing, though this is currently dominated by low-value industries.
- The pricey minerals are used in industries and sectors such as aerospace, automobiles, cameras, defence, entertainment systems, laptops, medical imaging, nuclear energy, and smartphones
- **China** is currently a leading global supplier for six out of the 12 mineral resources identified as critical for India by 2030.
- Though India is endowed with vast mineral resources – it is among the top five nations with reserves of rare-earth minerals – its potential is untapped
- For instance, minerals and metals such as bismuth, cadmium, gallium, germanium, indium, molybdenum, rhenium, selenium and tin are generally recovered as a by-product during processing of primary ores (lead, zinc, copper, molybdenum and aluminum).

‘Lost opportunity’

- “India has high production for these primary metals, yet no sign of by-product recovery [except tin] is evident so far. This is a lost opportunity, and demands suitable R&D interventions and policy support,
- The CEEW study comes on the heels of the National Mineral Exploration Policy, 2016 (NMEP).

Tax is not a barrier to free trade, says SC

A day after Parliament passed the Goods and Services Tax Bill for a uniform comprehensive tax regime to promote hassle-free trade, a nine-judge Constitution Bench of the Supreme Court on Thursday said **tax should not act as a barrier to free trade, commerce and intercourse.**

“It is this freedom of trade, commerce and intercourse which allows a trader to move from place to place within the country without obstruction. A trader moves constantly and so long as his fundamental right is protected under **Article 19**, there is no question of a fiscal restriction being an obstruction,” Chief Justice Thakur

Background

- Entry tax is imposed by the State governments on the movement of goods from one State to another.
- The Bench is hearing petitions from private manufacturers and companies against the **varied entry tax** levied by different States.
- The debate was on the contours of **Article 301** of the Constitution dealing with freedom, trade and commerce.
- **Article 301:** *Freedom of trade, commerce and intercourse Subject to the other provisions of this Part, trade, commerce and intercourse throughout the territory of India shall be free*
- The Bench is hearing on the validity of separate entry taxes on goods mandated by the statutes of various State governments, which did not heed the Centre’s plea to wait for the passage of the GST Bill in Parliament.

ScatSat- 1 to help in predicting cyclones

India is set to acquire the capability for more accurate prediction and tracking of cyclones, with the launch of the ScatSat-1 satellite in September, ISRO chairman A.S.Kiran Kumar said on Thursday

Salient Features

- The indigenously developed weather forecasting satellite will be equipped with on board instruments to monitor sea surface

winds and help predict the genesis of cyclones

- The primary payload of ScatSat-1 is a scatterometer to keep a watch on the speed and direction of ocean winds that indicate the formation and strengthening of cyclones.
- The satellite will have the capacity to monitor temperature and humidity and transmit 48 images per day.
- The best thing about this 301 kg satellite is that it is being built at 60% of the actual cost, and in one-third of the estimated time.
- About 40% of satellite is made by recycling the leftover equipment from previous satellite missions.
- It is a polar orbiting satellite that will take two days to cover the globe. The data will be used by NASA, European Organisation for the Exploitation of Meteorological Satellites, and National Oceanic and Atmospheric Administration as well.
- Scheduled to be launched by the PSLV- C35, the satellite is expected to replace Oceansat-2 which is out of service after completing its life span.

What is scatterometer?

- A scatterometer in the satellite will help predict formation of cyclones in the seas. Such predictions help in timely evacuation and minimise human casualties.
- A scatterometer is a microwave radar sensor. It measures the scattering effect produced while scanning the surface of the Earth from an aircraft or a satellite.
- It will measure the direction and speed of winds over the seas and oceans.

Background

- SCATSat-1 is an OceanSat-2 follow-up mission, actually a gap-filler mission

between OceanSat-2 and -3, under development at ISRO (Indian Space Research Organization) with the objective to continue the global ocean wind vector data acquisition started by the OSCAT (OceanSat-2 Scanning Scatterometer).

- The satellite has been designed to withstand multiple system failures, unlike the last one.
- The information of global ocean surface winds is an important ingredient for weather forecasts. In particular, a need for global coverage of scatterometer data became evident, when NASA's SeaWinds scatterometer on the QuikSCAT spacecraft ceased nominal operations in November 2009.
- Currently India is dependent on NASA's ISS-RapidScat for prediction of cyclone forecasting and weather prediction

Blow to AAP as HC says L-G is Delhi's administrative head

- The Delhi High Court on Thursday held that the **Lieutenant Governor** was its "**administrative head**" and that it "continues to be a Union Territory."
- The High Court also set aside the AAP government's contention that the L-G was supposed to act "**only on the aid and advice of the Ministers**" even as it declared "illegal"
- the commission of inquiry ordered by the AAP government into the **CNG Fitness scam** in the transport department
- also the Commission of Inquiry to go into the alleged irregularities in the functioning of the Delhi and District Cricket Association (DDCA).
- A Bench of Chief Justice G. Rohini and Justice Jayant Nath interpreted Article 239 A, 239AA of the Constitution and the

provisions of the Government of National Capital Territory of Delhi Act and the Transaction of Business Rules to rule that Delhi continues to be a Union Territory.

Notifications quashed

- "On a reading of **Article 239 and Article 239AA** of the Constitution together with the provisions of the Government of National Capital Territory of Delhi Act, 1991 and the Transaction of Business of the Government of NCT of Delhi Rules, 1993, it becomes manifest that **Delhi continues to be a Union Territory** even after the Constitution (69th Amendment) Act, 1991 inserting Article 239AA making special provisions with respect to Delhi," said the Bench.
- The court also quashed several notifications issued by Chief Minister Arvind Kejriwal after returning to power in February 2015, terming them "illegal" as they were issued "without concurrence of the L-G."

- The Delhi Government's senior standing counsel Rahul Mehra said they would file a Special Leave Petition against the judgment in the Supreme Court.

Doppler radar to boost weather forecasting

In a bid to improve weather forecasting services, Indian Space Research Organisation has commissioned a Doppler weather radar at the Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram.

The C- band Polarimetric Doppler weather radar (C-DWR)

- It is the first of its kind in South India.
- The data generated by the DWR would be shared with the India Meteorological Department to supplement its prediction.

- It would be made available to researchers and other user agencies also.
- The only other C- DWR in the country is at Chirapunji.
- Two more units are coming up at Bhuj in Gujarat and Gopalpur in Odisha.
- The DWR is expected to aid rainfall estimation and detect thunderstorm, cyclones and other severe weather events within a radius of 400 km.

Features

- It has instruments to measure rainfall intensity, wind shear and velocity and locate a storm centre and the direction of a tornado or gust front.
- Equipped with a parabolic dish antenna and a foam sandwich spherical radome, the radar is designed to improve precision in long range weather forecasting and surveillance using the Doppler effect.
- It works by bouncing a microwave signal off a target and analysing how the object's motion has altered the frequency of the return signal.

It's another giant leap, says Moon Express co-founder

An Indian American entrepreneur has begun a countdown for launching a moon lander next year after the Federal Aviation Administration (FAA) announced it has approved his company's venture.

Naveen Jain, the founder of **Moon Express**, termed the U.S. government's approval for the MX1-E moon lander "another giant leap for humanity."

Moon Express

- The company was co-founded in 2010 by space visionary, Dr Bob Richards, Naveen

Jain and serial entrepreneur and artificial intelligence and space technology guru Dr Barney Pell.

- The MX-1 will ride to the moon orbit on a space vehicle from Rocket Lab USA.
- One of that company's backers is Khosla Ventures created by Vinod Khosla, the venture capitalist who is an Indian Institute of Technology-Delhi graduate and who co-founded Sun Microsystems.
- Moon Express CEO Bob Richards cited the discovery of water on the moon as an incentive for lunar ventures.
- The discovery was accomplished by the Indian Space Research Organization's (ISRO) Chandrayaan-1 spacecraft with ISRO's Moon Impact Probe (MIP) and NASA's Moon Mineralogy Mapper (M3).
- The recent discovery of water on the moon is an economic game changer for humanity's future. Water is the oil of the solar system and the moon has become a gas station in the sky.
- Moon Express is the first private company to get government approval for a moon venture.
- The FAA described the MX-1E as a spacecraft that can orbit to the moon, make a soft landing on the lunar surface, and move on it by making "hops".
- Moon Express needed the FAA approval because the **Outer Space Treaty** requires private ventures to be authorised by a government that has signed the treaty.

NGT steps in to check Periyar pollution

The circuit bench of the National Green Tribunal (NGT) has ordered the inspection of all industrial units located on the banks of the Periyar river to check the feasibility of effluent treatment plants and to find out whether the

effluents discharged into the river are within the prescribed parameter.

Background

- The National Green Tribunal has been established on 18.10.2010 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 including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.
- It is a specialized body equipped with the necessary expertise to handle environmental disputes involving multi-disciplinary issues.
- National Green Tribunal Act, 2010 (NGT)[2] is an Act of the Parliament of India which enables creation of a special tribunal to handle the expeditious disposal of the cases pertaining to environmental issues.
- On 25 April 2014, the NGT said that the health of Yamuna will be affected by the proposed recreational facilities on the river. The NGT also recommended the Government to declare a 52 km stretch of the Yamuna in Delhi and Uttar Pradesh as a conservation zone.

Fly on rails: Global tenders floated to induct Maglev trains

- The Indian Railways plans to introduce Maglev trains that can run at a top speed of 500 km an hour, in a bid to lure passengers from airlines.
- After receiving a proposal from a foreign investor, the Railways last week floated an expression of interest (EoI) for calling of a global tender to develop trains and tracks

that operate on the principle of magnetic levitation (Maglev)

- According to the document, the developer will be responsible for designing, testing, building, running trials and operations of the levitation-based system between two key cities at a distance of 200-500 km.
- Maglev trains are in operation in China, Japan, Germany and South Korea. As the trains are propelled by magnetic forces, friction is eliminated, making transportation free of noise and vibration.
- Maglev (derived from magnetic levitation) is a transport method that uses magnetic levitation to move vehicles without touching the ground.
- With maglev, a vehicle travels along a guideway using magnets to create both lift and propulsion, thereby reducing friction by a great extent and allowing very high speeds.

'Fail-safe' system

- The government has called for a 'fail-safe' system in which passengers and cargo are safe even in case of "failure of any system of the train tracks or controls."
- The government said the developer shall be responsible for a third-party inspection of the entire train system.
- The developer will be given a free-hand in running the train services, fixing schedule, fares and add-on services on board, the EoI document added.
- The developer will be required to submit the funding plan for the investment along with their audited financial statements for the last five years.

TRAI for strict quality norms

- The Telecom Regulatory Authority of India on Friday issued a consultation paper seeking to tighten the benchmarks for measuring the quality of service offered by telcos.
- While the regulator has sought stakeholders' view on an appropriate way to calculate call drop rates, it has suggested that instead of measuring it for an entire service, the call drop rate be measured for smaller locations to identify problem areas.
- TRAI also elicited a debate for imposing financial disincentives in case of below par performance.
- The Telecom Regulatory Authority of India (TRAI)
- established with effect from 20th February 1997 by an Act of Parliament, called the Telecom Regulatory Authority of India Act, 1997
- to regulate telecom services, including fixation/revision of tariffs for telecom services which were earlier vested in the Central Government.
- The TRAI Act was amended by an ordinance, effective from 24 January 2000, establishing a Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT) to take over the adjudicatory and disputes functions from TRAI.
- TDSAT was set up to adjudicate any dispute between a licensor and a licensee, between two or more service providers, between a service provider and a group of consumers, and to hear and dispose of appeals against any direction, decision or order of TRAI.

14 killed as Bodo rebels attack market in Kokrajhar

- Fourteen persons, including two women, were killed in Kokrajhar district of Assam in broad daylight on Friday when militants dressed in Army fatigues opened fire and hurled bombs at a busy weekly market.
- Though the incident occurred 15 km from Kokrajhar town, an Army patrol van which was nearby when the firing started engaged the terrorists, killing one of them.
- The National Democratic Front of Bodoland (NDFB) is an armed separatist outfit which seeks to obtain a sovereign Bodoland for the Bodo people in Assam, India.
 - It is designated as a terrorist organisation by the Government of India
 - The NDFB constitution, adopted on 10 March 1998, lists its objectives as the following
 - Liberate Bodoland from the Indian expansionism and occupation;
 - Free the Bodo nation from the colonialist exploitation, oppression and domination;
 - Establish a Democratic Socialist Society to promote Liberty, Equality and Fraternity; and
 - Uphold the integrity and sovereignty of Bodoland.

MAA- a programme to promote breastfeeding

Government has launched **National Breastfeeding Promotion Programme- MAA** (mothers' absolute affection) to ensure adequate awareness is generated among masses, especially mothers, on the benefits of breastfeeding.

Details:

- The goal of the Programme is to enhance optimal breastfeeding practices, which includes initiation of breastfeeding within an hour of birth, exclusive breastfeeding for the first six months, and continued breastfeeding for at least two years.
 - The government will train nurses in government hospitals, **Accredited Social Health Activists (ASHA), Auxiliary Nurse Mid-wives (ANM)** to provide relevant information and counselling support to mothers for breastfeeding.
 - Monitoring and impact assessment is also an integral part of MAA programme. Progress will be measured against key indicators, such as availability of skilled persons at ground for counselling, improvement in breastfeeding practices and number of accredited health facilities.
 - Dedicated funds – Rs 4.3 lakhs per district, have been allocated to states for the programme, which is in addition to the funds approved under National Health Mission's annual project implementation plans.
 - To ensure effective roll-out of the programme ministry of health has established MAA secretariat and a steering committee will be created in all states and at the district level.
 - The programme will be monitored by UNICEF and other partners. Unicef has roped in actor Madhuri Dixit as brand ambassador to promote breastfeeding.
- 1,56,000: child deaths could be reduced in India with breastfeeding.
 - 4 million: respiratory infection episodes can be reduced.
 - 9 million: Diarrhoea episodes can be reduced.
 - 15 times: children are more likely to die of pneumonia who are not breastfed.
 - 11 times: children are more likely to die of diarrhea.
 - 20,000: mothers' deaths due to breast cancer can be averted globally if mothers breastfeed for more than a year.
 - 3 to 4 points: Increase in IQ, depending on the duration of breastfeeding.

Indian Scenario:

- 7%: deliveries take place in hospitals.
- 6%: children receive breastfeeding within one hour of birth.
- 9%: exclusively breastfed for the first six months.
- 5%: children between 6-8 months given complementary foods.

Ponzi schemes not under our purview: SEBI

The Securities and Exchange Board of India (SEBI) has denied any regulatory purview over ponzi schemes, squarely placing the responsibility of protecting investors on State governments.

Background:

This was clarified by the SEBI while responding to the Supreme Court's poser as to what the government and the market regulator were doing to check the "menace" of schemes running across the country in various forms

Importance of breast feeding:

- 13%: children die below 5 yrs of age, owing to poor breastfeeding practices.
- 823 000: child deaths can be averted every year.

which robbed the poor and small investors of their hard-earned money.

What has the SEBI said?

Ponzi schemes are banned under the **Prize Chit and Money Circulation (Banning) Act, 1978** and the **State government concerned is the enforcement agency**. Though it is a Central Act, the respective State governments are the enforcement agency of this law.

What are Ponzi Schemes?

A Ponzi can be any scheme in which the returns to promised to older investors are paid from the money collected from new investors, and not actual profits from the investments. Ponzi schemes were named after Charles Ponzi, a clerk in Boston who, almost a century ago, duped thousands of investors into speculating on phenomenal returns from the humble postage stamp.

- Those running a Ponzi scheme reel in their first set of investors by introducing them to a great opportunity. They may even pay up the fanciful returns out of their personal funds. But once investors begin to bite, they build a house of cards, using money from the stream of new entrants, to pay the older patrons.
- Even if profits are made from the investments, more often than not, the scheme operators siphon it off to private accounts. As long as new investors are willing to sign up, the Ponzi scheme works. But when the flow of fresh money dwindles, the house of cards collapses.

Madras HC disposes of pleas challenging classical status to Kannada, Telugu, Malayalam

Madras High Court has disposed of a batch of public interest litigation petitions which challenged the classical language status

accorded to Kannada, Telugu, Malayalam and Odia.

What has the court said?

The court has made it clear that only experts can verify whether the languages satisfy the norms set for according the classical status. Also, the court could not be converted into a forum for debate on such matters. If the petitioner still felt that the particulars furnished by the respective States would not satisfy the criteria, the court said: "It is open to them to approach the authorities. Similarly, they can also give suggestions for determination of the type of literature that can be the benchmark for qualification for consideration to the concerned authorities."

Classical languages:

In 2004, the Government of India declared that languages that met certain requirements could be accorded the status of a "Classical Language in India". Languages so far declared to be Classical are Tamil, Sanskrit, Kannada, Telugu, Malayalam, and Odia.

Criteria to determine the eligibility of languages to be considered for classification as a "Classical Language":

1. High antiquity of its early texts/recorded history over a period of 1500–2000 years.
2. A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers.
3. The literary tradition should be original and not borrowed from another speech community.
4. The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.

Saudi King orders resolution of foreign workers' issues

- Saudi Arabia's King Salman has ordered authorities to address "once and for all" the grievances of distressed foreign workers, especially Indians and the Filipinos, stranded in the Kingdom after not being paid for months.
- The king has ordered the authorities to oblige companies who have contracts with the government to pay the salaries of their employees in accordance with the government's Wage Protection Programme.

Background:

The King's directives come amid increasing complaints by workers that they have not been paid their salaries for months. Mainly affected are India and Philippines communities. Currently, a total of 7,700 affected Indian workers are living in 20 camps in the country and the Indian embassy is in the process of collecting information about others residing in different parts of Saudi Arabia.

What is the issue?

The Saudi government was forced to cut its spending last year on the back of plummeting oil prices. As a result, it created pressure on the financials of local construction companies. Such firms employ foreign workers and rely on state contracts. The resultant strain on the firms led to nearly 10,000 workers being laid off, and left them with no money to even eat food. More than 2,500 Indians are said to be living in labour camps with no food for the past 10 days.

What has the Indian government done?

The government has announced that it will be evacuating all the workers that are stuck there and bring them back home. Indian Minister of State for External Affairs V.K. Singh also visited Saudi Arabia to resolve the issue. The citizens are likely to be evacuated by airlifting them.

The Centre will also be urging authorities in Saudi Arabia to help with exit visas and release the arrears of Indian workers as well.

A Crisis Management Group has also been set up by the Ministry of Labour to settle all issues related to Indian workers. The Saudi government will soon be appointing a lawyer and the exact procedure regarding the issue of salary and other dues pending to the Indian workers there will be established in the next 2-3 days.

- The **seventh India-Japan International Conference** on 'Science and Technology: Future Challenges and Solutions', was recently held in Mysore, Karnataka.

- **Global Green Award: Dr. Dhrubajyoti Ghosh** has received the Luc Hoffman award, one of the highest international awards in environmental leadership. Dr. Ghosh was involved in mapping East Kolkata

- Wetlands and calculating its economic value. He is the first Indian environmental activist to receive the Luc Hoffman award.

- **Mission Bhagiratha:** PM Modi recently inaugurated a massive 40,000-crore Telangana state water grid 'Mission Bhagiratha'. It aims to provide safe drinking water through a pipeline. The objective is to provide 100 liters of clean drinking water per person in rural households and 150 liters per person in urban households. This project aims to provide water to about 25,000 rural habitations and 67 urban habitations.

- **New Gujarat CM:** Vijay Rupani has sworn in as the 16th Chief Minister of Gujarat after Anandiben Patel who resigned recently.

- **TWRIS:** Telangana Irrigation Department has signed a memorandum of understanding with the Indian Space Research Organisation for setting up a

Telangana Water Resources Information System (TWRIS) on the 'Bhuvan' web portal. The objective is to capture every field-level irrigation network including dams/barrages, anicuts, main and field channels, etc. and mark every irrigation structure on satellite visualisation tool Bhuvan (similar to Google Earth).

- **Tiantong-01:** China has successfully launched its first satellite for mobile telecommunication, Tiantong-01. It is the first satellite of China's homemade satellite mobile telecom system, and a key part of the country's space information infrastructure.
- **Sachet:** The RBI, in line with its efforts to curb illegal and unauthorised pooling of funds by unscrupulous firms, has launched a **website - Sachet**. The step aims at helping people get information about legalised entities, who are allowed to collect public deposits/ provide investment management services, entities barred from doing so, besides receiving on-the-ground information on illegal entities.

Paid maternity leave increased to 6 months

The Union Cabinet has approved amendments to the **Maternity Benefit Act of 1961** to increase paid leave for expectant mothers from three months to six and a half months. The Maternity Benefit (Amendment) Bill of 2016 will now be introduced in the Rajya Sabha.

Details:

- The amendment bill seeks to increase maternity leave to 26 weeks in all establishments, including private sector. The act is applicable to all establishments employing 10 or more persons.
- The bill also provides 12 weeks leave for commissioning and adopting mothers and makes it mandatory to provide creche

facility for establishment where the number of workers is 50 and above. At present, the Maternity Benefit Act does not provide any maternity leave for commissioning or adopting mothers.

Significance of these amendments:

Maternal care to the Child during early childhood is crucial for growth and development of the child. The amendments will help 18 lakh women workforce in organised sector. They also help women devote time to take care of their babies and enable an increase in the women's labour force participation (WLFPR) rate in India. The labour force participation rate (LFPR) in India is around 40%, but for females, it is only 22.5%. The gap in male-female labour force participation is such that the LFPR for rural women above 15 years is only 35.8%, while for rural males it is more than double at 81.3%, according to a 2015 research paper by the government policy think tank NITI Aayog.

Background:

The Maternity Benefit Act, 1961, protects the employment of women during the time of maternity and entitles them of a full paid absence from work to take care for the child.

MPs petition PM for hike in MPLAD Fund

A delegation of MPs has petitioned Prime Minister Narendra Modi for an increase in the Member of Parliament Local Area Development (MPLAD) Fund. The delegation has asked that the fund, currently Rs. 5 crore for a five-year term (Rs. 1 crore for each year), be increased to Rs. 25 crore.

About MPLAD scheme:

It was launched in December, 1993, to provide a mechanism for the Members of Parliament to

recommend works of developmental nature for creation of durable community assets and for provision of basic facilities including community infrastructure, based on locally felt needs.

Salient features:

- MPLADS is a **centrally-sponsored plan** scheme fully funded by the government of India under which funds are released in the form of grants-in-aid directly to the district authorities.
- Works, developmental in nature, based on locally felt needs and always available for the use of the public at large, are eligible under the scheme.
- Preference under the scheme is given to works relating to national priorities, such as provision of drinking water, public health, education, sanitation, roads, etc.
- The funds released under the scheme are **non-lapsable**. the liability of funds not released in a particular year is carried forward to the subsequent years, subject to eligibility.
- The MPs have a **recommendatory role under the scheme**. They recommend their choice of works to the concerned district authorities who implement these works by following the established procedures of the concerned state government.
- The district authority is empowered to examine the eligibility of works sanction funds and select the implementing agencies, prioritise works, supervise overall execution, and monitor the scheme at the ground level.
- The district authorities get the works executed through the line departments, local self governments or other government agencies. In some cases, the district authorities get the works executed through reputed non government organisations.

- The **Lok Sabha Members can recommend works in their respective constituencies. The elected members of the Rajya Sabha can recommend works anywhere in the state from which they are elected. Nominated members of the Lok Sabha and Rajya Sabha may select works for implementation anywhere in the country.**

Cabinet nod for changes to FDI regulations in NBFCs

The Cabinet has approved a proposal to amend rules for foreign investment in non-banking finance companies (NBFCs)

As per the new norms:

- Foreign investment in 'other financial services' that are not regulated by any regulators or by a government agency can be made via the approval route.
- Minimum capitalisation norms as mandated under FDI policy have been eliminated as most of the regulators have already fixed minimum capitalisation norms.

Background:

The present regulations on NBFCs stipulates that FDI would be allowed on automatic route for only 18 specified NBFC activities after fulfilling prescribed minimum capitalisation norms mentioned therein.

NBFCs:

- Non-bank financial companies (NBFCs) are financial institutions that provide banking services without meeting the legal definition of a bank, i.e. one that does not hold a banking license. These institutions typically are restricted from taking deposits from the public depending on the jurisdiction. Nonetheless, operations of these institutions are often still covered under a country's banking regulations.

- The Reserve Bank of India is entrusted with the responsibility of regulating and supervising the Non-Banking Financial Companies by virtue of powers vested under Reserve Bank of India Act, 1934.

NBFCs lend and make investments and hence their activities are akin to that of banks; however there are a few differences as given below:

- NBFC cannot accept demand deposits.
- NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself.
- Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs, unlike in case of banks.
- **Kudankulam Nuclear Power Project (KKNPP):** First unit of KKNPP was recently dedicated to the nation. The 1,000-MWe KNPP-1 is the largest single unit of electrical power in India. The first Unit of the Kudankulam Nuclear Power Plant was built with the expertise of the Russians after a pact between the then Prime Minister Rajiv Gandhi and Soviet leader Mikhail Gorbachev in November 1988. The unit was synchronised with the southern grid on October 22, 2013, and became fully functional on December 31, 2014.
- **Croatia:** The Union Cabinet has given its approval for signing and ratification of an Agreement between India and Croatia on Economic Cooperation. India and Croatia had earlier signed an Agreement on trade and economic cooperation in September, 1994 with an aim to promote and develop bilateral trade and economic relations. Croatia is a sovereign state at the crossroads of Central Europe, Southeast Europe, and the Mediterranean. It is a member of the European Union (EU), United Nations (UN), the Council of Europe, NATO, the World

Trade Organization (WTO) and a founding member of the Union for the Mediterranean

- **Central Silk Board:** K M Hanumantharayappa has assumed charge as new Chairman of Central Silk Board, Union Ministry of Textiles. He is the 25th Chairman of the Central Silk Board. CSB is a statutory body established under the Central Silk Board Act, 1948. It functions under the aegis of Union Ministry of Textile.

Mahadayi tribunal term extended

The government has issued a notification extending the term of Mahadayi tribunal for a year. This could prolong the dispute between Karnataka and Goa over river water sharing.

- An extension of term is provided in the normal course if the tribunal's work is not completed within the stipulated period. Under proviso to Section 5 (2) of the Inter-State River Water Disputes Act, the power is vested in the government which appointed the tribunal to extend its tenure.

Background:

A water disputes tribunal set up under the Act is originally meant to complete its assigned work in three years. If the work is not completed, the government can extend its tenure by a year and further by a second year. The tribunal is yet to examine few witnesses. Its current tenure expires on August 20.

About the dispute:

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

- Mahadayi, also known as the Mandovi river, is known as a lifeline in the northern parts of Karnataka. The river originates and flows for 28 kilometer in Karnataka and goes through Maharashtra and Goa before meeting the Arabian Sea.

- 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.
- The Kalasa-Banduri Nala is a project undertaken by the Government of Karnataka to improve drinking water supply to the Districts of Belagavi, Dharwad and Gadag.

Ministry wants SEZs' tax sops to continue

The Commerce Ministry has raised with the Finance Ministry the Special Economic Zone (SEZ) sector's concerns about the lack of clarity in the proposed Goods & Services Tax (GST) regime on the continuation of tax & duty exemptions.

Concerns:

Currently, many tax and duty incentives have been offered to SEZ units and developers in the SEZ policy to help them attract investments, and in turn, generate employment and boost exports. However, the proposed GST regime does not provide clarity on these SEZ-related incentives.

Way ahead:

Commerce Ministry has asked the Finance Ministry to continue incentives that are currently provided to the SEZs.

As per the current norms, SEZs are tax and duty-free enclaves and are deemed to be foreign territory for purposes of taxes, duties and trade. Other exemptions provided include:

- Duty-free import and duty-free domestic procurement of goods for development, operation and maintenance of SEZ units.
- No Central Sales Tax (CST), service tax and State sales tax.
- Exemption from customs/excise duties for development of SEZs for authorised operations approved by the SEZ Board of Approval.
- No excise duty on raw material procurement by SEZs from Domestic Tariff Area (or DTA, which is the area outside the SEZs but within India) as such procurement is treated as exports from DTA to SEZ.

What is a Special Economic Zone(SEZ)?

SEZ is a geographical region that has economic laws different from a country's typical economic laws. Usually the goal is to increase foreign investments.

Who can set up SEZs? Can foreign companies set up SEZs?

Any private/public/joint sector or state government or its agencies can set up an SEZ.

What is the role of state governments in establishing SEZs?

State governments will have a very important role to play in the establishment of SEZs. Representative of the state government, who is

a member of the inter-ministerial committee on private SEZ, is consulted while considering the proposal. Before recommending any proposals to the ministry of commerce and industry (department of commerce), the states must satisfy themselves that they are in a position to supply basic inputs like water, electricity, etc.

The main objectives of the SEZ Act are:

- Generation of additional economic activity.
- Promotion of exports of goods and services.
- Promotion of investment from domestic and foreign sources.
- Creation of employment opportunities.
- Development of infrastructure facilities.

Gujarat's new land acquisition Bill approved by the President of India

The Gujarat Land Acquisition Bill 2016, that dilutes the Centre's stringent provisions of the Land Acquisition Act 2013, has been given approval by the President and will take effect on August 15th.

Contentious provisions in the Bill:

- The Bill has done away with social impact assessment for projects related to defence and social infrastructure like building public roads, canals and schools and affordable houses and also for acquisition of land for industrial corridors.
- It empowers the authorities to exempt projects "vital to defence of national security of the country", "infrastructure and electrification project or affordable housing for the poor" or "industrial corridors set up by the State or its undertakings" and "infrastructure projects under public-private partnership" from social impact

assessment or consent clauses as incorporated in the central Act.

- It also allows the State or its undertakings to acquire land up to one kilometre on both sides of designated railway lines or highways in industrial corridor projects.

Should the Indian Standard Time (IST) be advanced to 6 hours?

Experts have proposed advancing the Indian Standard Time (IST) by half an hour. Stating that such a change is the need of the hour, scientists have said that advancing the IST by half an hour will save energy by upto three billion units every year.

Background:

The time zone for India is based on 82.5° E longitude, passing through Mirzapore, U.P. This makes it five hours and 30 minutes ahead of the Coordinated Universal Time (UTC), based on the prime meridian. This is defined as the Indian Standard Time (IST), and has been official time since independence in 1947.

What's the new proposal?

Experts have suggested a change in IST to six hours ahead of UTC, instead of the present five-and-a-half hours. This would shift the longitude on which IST is based from 82.5° E to 90° E longitude at Bengal-Assam border.

Why?

According to experts, this shift may reduce the energy demand in the evenings as domestic lighting will be reduced by about 16%. This has many economic and operational benefits. It also saves about Rs 1500 crore per annum for the nation.

Analysis:

From West to East, India spans from 68° 72' E to 97° 25' E of the 0° longitude or the prime meridian. A spread of more than 29° implies

almost two hours time difference in sunrises and sunsets between east and west part of the country. However, it is essential for a country to follow a standardised time so that offices, transport systems and communication systems can function smoothly. The current IST (UTC+5:30hrs) means that people in northeastern states have to work late into the dark, even though sun rises and sets early in their region. The current IST generates a heavy load in electricity, especially in the evenings which most companies find hard to meet and imposes substantial economic loss to the nation.

- **Lothal:** A Maritime Heritage Complex Committee with Secretary (Shipping) as Chairman has been constituted with members from related Ministries and Experts in Maritime Heritage for planning of a Maritime Heritage Complex at Lothal. Lothal is one of the most prominent cities of the ancient Indus valley civilisation, located in Gujarat. Lothal is famous for its dockyard – the world’s earliest known.

Deep Brain Stimulator

Bhabha Atomic Research Centre and Sree Chitra Tirunal Institute for Medical Sciences & Technology (SCTIMST), Thiruvananthapuram have agreed to join hands to develop ‘Deep Brain Stimulator’ (DBS).

What is DBS and how it operates?

DBS involves implanting electrodes within certain areas of brain and the regular electrical pulses generated by a pacemaker-like device placed under the skin in upper chest regulates the abnormal impulses of the brain.

- The DBS consists of implanted pulse generator, electrodes and extension cables which interface with external Programmer module and wireless battery charger.

Applications:

DBS is used in typical neurological conditions of Essential tremor, Parkinson’s disease and Dystonia.

Current scenario:

These devices are currently being imported, limiting its wider usage due to the high cost. The planned joint development is targeted to provide an affordable alternative.

Central Agricultural University (Amendment) Bill, 2016

Parliament has passed the Central Agricultural University (Amendment) Bill, 2016.

Key facts:

- The bill seeks to amend the Central Agricultural University Act, 1992, that was enacted for the establishment and incorporation of a university for the north-eastern region in order to promote development and research in agriculture and allied sectors.
- The bill includes Nagaland under the jurisdiction of Imphal Central Agriculture University (CAU). The amendment will help Nagaland to reap the benefit of the Imphal Central Agriculture University, established for the entire north eastern region.
- After inclusion of Nagaland under jurisdiction of the CAU, the College of Veterinary Sciences in Nagaland would produce the much-needed professional manpower in the fields of animal husbandry, which will facilitate socio-economic growth in the region.
- The new college would help familiarise the farmers with new techniques, thereby contributing to the production and

productivity of domestic animals in the State of Nagaland.

CAG uncovers roads to nowhere

According to the performance audit report of the Pradhan Mantri Gram Sadak Yojana (PMGSY) by CAG, tabled in Parliament recently, a total of 372 works under the rural road connectivity scheme were abandoned/proposed to be abandoned mid-way in 11 States, due to non-availability of land or land disputes. Of these, Rajasthan accounts for the highest - 213 abandoned works - followed by Odisha with 107 works.

Highlights of the report:

- In 26 States, 4,496 works were delayed from one month to 129 months. Among these, Bihar accounted for the highest number of delays at 1,243, due to paucity of funds and non-availability of material, followed by 572 in Odisha, 378 in Rajasthan due to land dispute, heavy rain, as well as paucity of funds, and 367 works in Uttar Pradesh.
- The report also found a few discrepancies, such as unconnected habitations that were shown as connected, non-inclusion of eligible habitations, etc, in 19 States.
- In seven States - Bihar, Gujarat, Jharkhand, Madhya Pradesh, Tamil Nadu, Tripura, and West Bengal - 73 road works were executed and shown as completed.
- To reduce systemic deficiencies and closer monitoring of the scheme, the CAG report urged the nodal Rural Development Ministry to create a Geographical Information System data base of rural roads information system for each State, and fix responsibility and accountability of agencies and individuals.

About PMGSY:

PMGSY was launched on 25th December 2000 as a fully funded Centrally Sponsored Scheme

to provide all weather road connectivity in rural areas of the country. The programme envisages connecting all habitations with a population of 500 persons and above in the plain areas and 250 persons and above in hill States, the tribal and the desert areas.

The objective was to give roads to villages:

- With a inhabitants of 1000 persons & more by year 2003
- Having populace of 500 & more by 2007
- Mount states, ethnic & desert region villages having a population of 500 & more by the year 2003, &
 - Mount states, ethnic & desert region villages having population of 250 & more by 2007.
 - **Diamond Quadrilateral:** Six corridors on Diamond Quadrilateral connecting metropolitan cities and growth centers of the country (Delhi, Mumbai, Chennai & Kolkata) have been identified for feasibility studies for high speed rail connectivity viz: (i) Delhi-Mumbai, (ii) Mumbai-Chennai, (iii) Chennai-Kolkata, (iv) Kolkata-Delhi and both diagonals i.e. (v) Delhi-Chennai and (vi) Mumbai-Kolkata routes. Feasibility studies are being undertaken through Government to Government cooperation, with China and Spain respectively
- **Longest living vertebrate: Greenland sharks** have been named the longest-living vertebrate on Earth. University of Copenhagen researchers estimated that these sharks live at least 400 years, nearly two centuries longer than the whales. They are the largest fish native to Arctic seas, with adults typically measuring between 13 and 16 feet and females consistently outgrowing the males. To determine the age of Greenland sharks, researchers examined the eye lens nuclei of 28 females, caught during scientific surveys. Analysis suggested that

these sharks reach sexual maturity around the age of 150.

- **S-400:** It is the new advanced S-400 air defence missile system deployed by Russia to annexed Crime
- **Rhino horn verification:** The verification of rhino horns to check their genuineness and updating of the complete inventory of horns kept in various treasuries in the custody of Assam government since 1980, has begun in Assam. The first treasury to be opened will be **Golaghat** with the highest number of rhino horns in government custody with most from Kaziranga National Park. The rhino horns are scattered in 12 treasuries of Assam, the maximum being in Golaghat followed by Nagaon, Guwahati and Tezpur.
- **Krishna Pushkaralu:** It is a festival of River **Krishna** which normally occurs once in every 12 years and is celebrated with much glory. The Pushkaram is observed for a period of 12 days from the time of entry of Jupiter into Virgo (Kanya rasi). Krishna Pushkaralu 2016 recently began in Telangana.
- **Huge LPG subsidy savings:** CAG findings have revealed that about 92% of the Rs. 23,300-crore savings in subsidy payouts by the Petroleum Ministry in 2015-16 was due to the sharp fall in oil prices
- **M.S. Subbulakshmi** : The **United Nations** will issue a stamp to mark the birth centenary of M.S. Subbulakshmi during celebrations for India's Independence Day. Subbulakshmi, whose birth anniversary falls on September 16, performed at the UN fifty years ago, making her the first Indian to have the honour. Subbulakshmi was a Carnatic vocalist. She was the first musician ever to be awarded the Bharat Ratna, India's highest civilian honour. She is the first Indian musician to receive the Ramon Magsaysay award, often considered Asia's Nobel Prize.
- **100 million for 100 million:** It is a campaign launched by **Nobel laureate Kailash Satyarthi recently**. It targets 100 million youth, whose idealism, energy and enthusiasm would help liberate the 100 million children shackled in slavery and poverty across the world.
- **Bharatavani:** The government is planning to digitize as many as **165 important Tulu works** and make available on-line on a Union government portal. They will be uploaded under the Bharatavani project, an initiative of the Union Ministry of Human Resource Development. Bharatavani project is about making available "knowledge in and knowledge about" all languages in the country in multimedia formats (text, audio, video and images) through an online portal.

Political Developments in Arunachal Pradesh and its Constitutional Implications

Events leading up to SC Judgement

- Grumblings of discontent in Congress camp against the leadership of Arunachal Pradesh CM Nabam Tuki
- 20 Congress MLAs along with 11 MLAs from BJP and 2 independents had supported a motion to impeach Speaker.
- Speaker initiated Anti Defection Law Proceedings against them
- Governor advanced the session of state assembly by nearly a month. This decision was taken without consulting the CoM
- He asked the house to take up a motion to remove the Speaker as the first item on the agenda
- This led to a shutdown of the legislature at the behest of the Chief Minister and the Speaker, and the dissidents held a parallel session at a makeshift venue, where the

Speaker was 'removed' and a 'no-confidence' motion against the government adopted.

- The speaker under the provisions of Anti Defection Law disqualified the dissenting MPs of Congress. This decision was challenged in Gauhati HC which, later on, provided relief to the disqualified MPs
- The Governor submitted a report to President highlighting the breakdown of law and order machinery in the state. Centre, acting on the report of the Governor imposed President Rule in the state. Since the No confidence motion at the makeshift venue was adopted, it led to the dismissal of Nabam Tuki Regime and the installation of BJP led Kalikho Pul regime
- Recently, Constitutional Bench of SC reversed President rule, ordered dismissal of BJP led govt and asked Nabam Tuki to prove his majority in a floor test.

Significance of the judgement

The judgement of SC is historic as it is the first instance when SC announced reinstatement of govt dismissed under President's Rule. In previous cases such as SR Bommai v/s UoI, Rameshvar Prasad v/s UoI, declaration of President Rule was held unconstitutional, but reinstatement was not done.

Several constitutional angles were analysed in the judgement such as:

- What is the ambit of discretionary powers of the governor
- The authority of governor over the speaker
- Constitutional propriety of governor discharging the speaker's role such as setting the agenda of the house etc
- Speaker's authority with respect to Anti Defection law cases and whether such cases

can be decided by the speaker at a time when removal proceedings have been initiated against the speaker

Understanding President Rule:

- U/A 356, the President on a report of the governor or otherwise can impose President Rule in the state under condition of breakdown of Constitutional machinery
- Breakdown of Constitutional Machinery occurs U/A 365 when the state fails to comply or give effect to the directions given by the Centre in exercise of its executive power
- Also, U/A 355, it is the responsibility of the state to protect the state from external aggression or internal disturbance

President Rule has been misused several times in the past in the game of political one man upmanship. The imposition of President Rule was challenged in SR Bommai v/s UoI, 1994 case. In this case the SC gave several important guidelines wrt imposition of President Rule. These are:

- Held that Federalism and Secularism are part of Basic Structure
- Majority of CoM shall always be tested on the floor of the house
- Centre should give a warning and 1 week for the state to reply (Audi Altrem Partem = one of the principles of natural justice which is everyone has the right to be heard)
- Court cannot question the advice of CoM to President (Art 74(2)) but can scrutinize material that led to imposition of President rule
- Judicial review is applicable. In case of review by court, three aspects will be analysed

- Whether any material exists which justified imposition of President Rule (91st CAA, 2003) i.e. group mergers are allowed
- Whether the material is relevant
- Whether there has been any malafide use of power
- If improper application of Art 356, court will provide relief including reversal of all actions of Centre
- Art 356(3) limits power of President within first two months, when approval by Parliament is pending. Till the time Parliament approves, no permanent action can be taken i.e. state government can be suspended but not dismissed
- Art 356 is justified only in case of breakdown of Constitutional Machinery and not under cases of breakdown of Administrative Machinery
- Presiding officer can resign from their party on assuming office and re-join same party post demitting office (to maintain neutrality of Speaker's chair)
- Speaker is the final adjudicating body wrt Anti defection law proceedings
- Earlier speaker's decision was final. But in **Kihoto Hollohan v/s Zachilthu**, SC held Judicial Review applicable in such cases as it is a part of Basic Structure (Maneka Gandhi v/s UoI, 1980)
- SC also limited disqualification to proceedings affecting the stability of govt. Otherwise, the court held, that it leads to curbing Freedom of Speech U/A 19(1)(a)
- ADL applicable in following cases

Understanding Anti Defection Law

- Anti Defection Law brought by 52nd CAA, 1985. It is contained in 10th Schedule
- 4 grounds of disqualification under Anti Defection Law
- Independent member joins any political party
- Nominated member joins a political party after 6 months of becoming a member
- Legislative party member voluntarily gives up membership of party/ joins another party/ indulges in anti-party activities
- Legislative Party member goes against direction of whip (action has to be reported by party within 15 days)
- 2 exceptions to above cases
- If not less than 2/3rd party members break away and merge with another party

Understanding SC Ruling in Arunachal Pradesh

- Confidence Motion
- No Confidence Motion
- Vote of Thanks to President's Address
- 1. What is the ambit of discretionary powers of the governor (Note that, U/A 163(2), what falls within the ambit of discretionary power of governor is also a discretion of the governor)
- 1. Discretionary powers to be interpreted very narrowly and in a limited manner. A governor can act in his own discretions if his actions are justified by or under the Constitution, but the governor's exercise of this discretion would be open to challenge where it can be shown to be *perverse, capricious, fallacious, extraneous or for a motivated consideration*

2. A governor can't use his discretionary powers to run a parallel administration or 'diarchy' challenging the existence of an elected state government.

3. Governor is not an elected representative but only an executive nominee whose powers flow from the advice of the cabinet. The governor is not "an all pervading super constitutional authority".

- The authority of governor over the speaker

1. The Governor is not an ombudsman for the Legislature nor the speaker's mentor. The Governor can't require the speaker to discharge his functions in the manner he considers constitutionally appropriate

- Constitutional propriety of governor discharging the speaker's role such as setting the agenda of the house, interfering in ADL proceedings

1. Using discretionary powers to summon or dissolve assembly sessions, setting the agenda of the house without the aid and advice of the CM and his Cabinet is unconstitutional

2. Any action taken by the governor based on the proceedings being carried on under the 10th Schedule would be a constitutional impropriety.

- Speaker's authority with respect to Anti Defection law cases and whether such cases can be decided by the speaker at a time when removal proceedings have been initiated against the speaker

1. The speaker cannot proceed with Anti Defection Law proceedings at a time when a motion for his removal is under consideration of the house. Speaker has to prove constitutional confidence before using the power of adjudication under Xth Schedule. Not doing so would be

an "anathema to the concept of constitutional adjudication"

Counterpoints to SC Ruling

- Primarily wrt judgement on curbing discretionary power of governor

- Constituent Assembly Debates - Governor could exercise discretionary power in matters of emergency or where they were widely accepted. And Summoning and Dissolving Assembly was one such power.

- Literal Interpretation of Article 163(2) makes Governor the sole authority on what falls within its discretion. Court can't exercise JR to judge Governor's Discretionary power.

- The SC Judgment reduced Governor to a figurehead

- However, line of argument should be in favour of SC ruling.

- The way the office of governor has been utilized - it has affected Centre State Relations

- Constitution envisages a Parliamentary form also at state level. In a Parliamentary form discretionary power to nominal head militates against the doctrine of limited government

- Healthy conventions should ideally be developed, which unfortunately has not been the case

- Punchhi Commission : ambit of discretionary power very narrow. Not to be used in an arbitrary or fanciful manner. Must be a choice dictated by reason, activated by good faith and tempered with caution

Punchhi

Commission Recommendations on President Rule:

- If situation envisaged u/a 355 occurs, all alternatives to be tried first. President rule should be the last recourse
- Application of Article 356 only to rectify a case of failure of constitutional machinery
- Incorporate guidelines given in SR Bommai case wrt exercise of power u/a 356 through suitable Constitutional amendments
- State emergency u/a 356, national emergency u/a 352 only a measure of last resort
- Inter State Council u/a 263 should be the appropriate forum to resolve all inter state and centre state disputes

Other SC judgements on Office of Governor

- **BP Singhal v/s UoI, 2010** (On question of removal of governor)
- Can't be removed arbitrarily
- Can't be removed on the basis of difference in ideology
- No reason to be provided at the time of removal, however, if PIL filed in SC, then the centre will have to provide a reason for removal. If reason is arbitrary, governor will be reinstated
- **Hargobind Kaur v/s Raghukul, 1979**
- Office of governor is not an employment under Central government
- It is an independent constitutional office

Reforms suggested for Office of Governor

- **Sarkaria Commission (1988) & Punchhi Commission (2010)** regarding appointment of governor
- Appoint governor by consulting CoM
- Politically active persons especially in last 5 years not to be appointed
- Appoint eminent persons in some walk of life as governor
- Not to be appointed in home state
- Not to be from opposite party in a state
- While recommending President rule, governor to highlight grounds of constitutional machinery failure
- To be allowed to complete 5 years
- Should always ask government to prove majority on floor of house
- **Punchhi Commission** on removal of governor
- To be on the same lines as that of President mutatis mutandis (change whatever that needs to be changed)
- Should be allowed to complete 5 year term

Independence Day

India is celebrating its **70th Independence day today**. The country became independent from British colonialism on this day in 1947.

Background:

On the 15th day of August, 1947, India's freedom struggles finally found closure. British Raj, or as all know it, the British colonial rule in India ended on this day.

Why 15th August was chosen?

Based on Mountbatten's inputs the Indian Independence Bill was introduced in the British House of Commons on July 4, 1947 and passed within a fortnight. It provided for the end of the British rule in India, on August 15, 1947, and the establishment of the Dominions of India and Pakistan, which were allowed to secede from the British Commonwealth.

The date was chosen by Lord Mountbatten himself because he had considered this date to be lucky. It was on this day during the World War II, that the **Japanese Army surrendered to the allies.**

Centre may ease regulatory norms for Exim Bank, ECGC

The Commerce Ministry is considering measures to strengthen state-owned export promotion firms – Exim Bank and Export Credit Guarantee Corporation (ECGC). The ministry is also planning to free them from strict regulatory norms to help boost exports.

Measures being considered include:

- More financial support from the government to augment companies' capital.
- Allowing them to retain the dividend amount instead of the current practice of paying it to the government.
- Freeing them from the stringent regulatory norms – removing Exim Bank from the supervision of banking regulator RBI and the ECGC from insurance regulator IRDAI's ambit.
- Increasing leverage ratio of EXIM bank, a mix of owners' equity and debt to finance the company's operations, from a low level of around 11 times the bank's Net-Owned Funds (NOF) to at least 15 times its NOF initially and then more at a later stage.

Why such measures are necessary?

Such reforms are necessary to ensure a major turnaround in the country's merchandise exports, which contracted 6.84% year-on-year to \$21.69 billion in July.

About EXIM bank:

Export-Import Bank of India was established in 1982 under the **Export-Import Bank of India Act 1981**. Since its inception, Exim Bank of India has been both a catalyst and a key player in the promotion of cross border trade and investment. Over the period, it has evolved into an institution that plays a major role in partnering Indian industries, particularly the Small and Medium Enterprises, in their globalisation efforts, through a wide range of products and services offered at all stages of the business cycle, starting from import of technology and export product development to export production, export marketing, pre-shipment and post-shipment and overseas investment.

About ECGC:

The ECGC Limited is a company **wholly owned by the Government of India**. It provides export **credit insurance support to Indian exporters and is controlled by the Ministry of Commerce**. Government of India had initially set up Export Risks Insurance Corporation (ERIC) in July 1957. It was transformed into Export Credit and Guarantee Corporation Limited (ECGC) in 1964 and to Export Credit Guarantee Corporation of India in 1983.

Functions:

- Provides a range of credit risk insurance covers to exporters against loss in export of goods and services as well.
- Offers guarantees to banks and financial institutions to enable exporters to obtain better facilities from them.

- Provides Overseas Investment Insurance to Indian companies investing in joint ventures abroad in the form of equity or loan and advances.

HCs have just a few minutes to hear each case'

"State of The Indian Judiciary" report was released recently by the Bangalore-based research organisation DAKSH under the "Rule of Law Project". The project aims to investigate the problem of pendency of cases. As of April 1, 2016, DAKSH had data for more than 40 lakh cases in its database covering 21 high courts and 475 district courts.

Highlights of the report:

- The average hearing time for listed cases on a particular day in an Indian high court is as little as two minutes. The time taken per hearing has been computed based on the working hours of judges and number of cases "listed" on a particular day.
- About 50% cases listed are adjourned. For instance, if 80 cases are listed, some 40 are adjourned, 35 don't reach and just five are heard.
- The report highlights problems faced by litigants, including the accused in criminal cases. It says 31% of individuals accused of bailable offences claimed that they continue to be in jail as they cannot afford bail or guarantors to stand surety. It also shows that less than 3% of litigants used legal aid, despite being eligible to take the benefit of government-appointed lawyers.
- The report also notes that time spent on a case, the frequency/infrequency of hearings, and change in judicial personnel not only impact understanding of pendency, but also adversely affects the concept of fair hearing, which is a

fundamental promise that the judiciary makes to the litigants.

Situation in different states:

- In the Patna High Court, a hearing lasts for around two minutes on an average, as judges hear around 150 cases every day. In Tripura High Court the average time per hearing is 15 minutes with judges hearing around 20 cases a day.
- The number of days between two hearings also varies across high courts. For instance, the most frequent hearings are held in the Calcutta High Court, with 16 days between hearings. They are most far apart in the Delhi High Court with 80 days between two hearings.
- The research also found that around 82% of cases in high courts have been pending for 10 to 15 years. The Allahabad High Court has the highest average pendency among all Indian high courts, with a case pending for an average of a little more than three years and nine months, whereas the High Court of Sikkim has the lowest average pendency of 10 months.

Way ahead:

This finding is key to judicial reform, as it is an indicator of the stress faced by judges on a daily basis. The report suggests that putting a cap on the number of hearings will allow reduction in judicial workload and may improve efficiency and also reduce the number of times litigants have to visit courts.

India to reject UN team's request to visit Kashmir, expose Pakistan's role in unrest

India is set to reject a UNHRC move to send a team to Jammu and Kashmir, pointing out that the domestic human rights panel was already at work while other institutions like Parliament and the Supreme Court had also discussed the situation in the state.

- In its reply to UNHRC, India has said that a visit by a UN Human Rights Council team is not required. It has also explained several measures the Indian government has taken to restore normalcy in J&K besides pointing to Pakistan's overt role in aggravating the situation in Kashmir by way of its open support to jihadi organisations instigating violence in India.

Background:

The UNHRC letter to India came after Pakistan urged it to investigate "human rights violations" in Kashmir.

About UNHRC:

It is an inter-governmental body within the United Nations system responsible for strengthening the promotion and protection of human rights around the globe and for addressing situations of human rights violations and make recommendations on them.

- It meets at the UN Office at Geneva and members are elected by the UN General Assembly.
- The term of each seat is three years, and no member may occupy a seat for more than two consecutive terms.
- The council works closely with the Office of the High Commissioner for Human Rights and engages the United Nations' special procedures.
- The General Assembly can suspend the rights and privileges of any Council member that it decides has persistently committed gross and systematic violations of human rights during its term of membership. The suspension process requires a two-thirds majority vote by the General Assembly.

- **Smart Ganga City programme:** The Union Government has launched the first phase of Smart Ganga City programme in 10 cities located along River Ganga. Haridwar, Rishikesh, Mathura, Varanasi, Kanpur, Allahabad, Lucknow, Patna, Sahibganj and Barrackpore are the cities/town where the programme will be implemented in the first phase. Under this programme, Sewage Treatment Plants (STPs) and improve drainage network will be set up on hybrid annuity mode on public private partnership basis.

India climbs 15 spots in innovation ranking

Global Innovation Index (GII) 2016 has been released. It is published by **Cornell University**, INSEAD, and the World Intellectual Property Organization, in partnership with other organizations and institutions.

GII 2016 Theme: "Winning with Global Innovation".

Highlights:

- Switzerland, Sweden, UK, U.S., Finland and Singapore lead the 2016 rankings.
- China joined the world's 25 most-innovative economies, becoming the first middle-income country to enter the top 25 of the index in its nine editions of surveying the innovative capacity of over 100 economies.
- Despite China's rise, an "innovation divide" persists between developed and developing countries amid increasing awareness among policymakers that fostering innovation is crucial to a vibrant, competitive economy.
- GII 2016 data indicate that global R&D grew by only 4% in 2014. This was a result of slower growth in emerging economies and tighter R&D budgets in high-income

economies – this remains a source of concern.

- China moves to 17th place in innovation quality, making it the leader among middle-income economies for this indicator.

India's performance:

- India climbed 15 spots, from 81 last year, to 66.
- India has maintained the top spot in the Central and South Asia regions.
- India scored high on tertiary education and R&D, the quality of its universities and scientific publications and its market sophistication.
- India ranks second on innovation quality among middle-income economies, overtaking Brazil.
- In information and communication technology service exports it ranks first in the world.

Way ahead for India:

India has all the ingredients needed to become a global driver of innovation including strong market potential, an excellent talent pool, and an underlying culture of frugal innovation. However, relative weaknesses exist in the indicators for business environment, education expenditures, new business creations and the creative goods and services production.

India has the ability to create a unique spot in innovation history to meet its own market requirements by using its cultural advantages of frugality and sustainability. Therefore, India's priorities for innovation need to be in the areas of energy, water, transport, health care, food security and digital consumption. It should also strengthen its own talent pool and leverage global talent "in these market-pull areas".

Drones better than satellites to gauge crop loss, says panel

According to a committee set up by NITI Aayog, drones are better than satellites in crop insurance schemes. The committee was tasked by NITI Aayog with studying how unmanned aerial vehicles (UAVs).

Why drones are better than satellites?

The current satellites would not be sufficient due to their non-availability during cloud cover, limited revisit possibility during the crop season and high price.

How UAVs are better?

UAVs gather data from low heights [i.e., below the cloud] and at very high resolution.

Other recommendations made by the committee:

- Sharing cadastral (land's location, ownership, tenure) details, Aadhaar card and bank account details should be made mandatory for effective crop insurance policies.
- Farmer field coordinates be made mandatory for issuance of insurance policy. This will help in tracking the crop field throughout the crop season without much ground monitoring, and, any kind of loss can readily be verified from satellite data.
- Pilot surveys that can estimate varying risk profiles for different regions of the country, and that for schemes such as PMFBY, drones are a better bet than satellite imagery.

Way ahead:

The committee is expected to submit its report to the National Institution for Transforming India (NITI Aayog) shortly.

'Sri Lanka-India economic pact may soon be a reality'

Y.K. Sinha, India's High Commissioner in Colombo, recently indicated that the proposed Economic and Technology Cooperation Agreement (ETCA) between India and Sri Lanka, which would be an improvement over the existing Free Trade Agreement (FTA), may soon be a reality. He also observed that there has to be "genuine debate and discussion" among stakeholders in Sri Lanka on this matter.

Background:

India-Sri Lanka bilateral trade stood at \$4.6 billion last year, of which Indian exports were valued at about \$4 billion. Nearly 60% of Sri Lankan exports were making use of the FTA whereas 90% Indian exports did not use the channel.

ETCA:

The Indo-Lanka Economic and Technology Cooperation Agreement better known as ETCA (formerly CEPA) is a trade agreement. The ETCA agreement seeks to boost cooperation in technical areas, scientific expertise and research amongst institutions, boost standards of goods and services able to compete on the global market and improve opportunities for manpower training and human resource development.

GM mustard trials: CIC asks govt to reveal bio-safety data

The Central Information Commission (CIC) has directed the environment ministry to reveal safety data regarding trials of genetically modified (GM) mustard without further delay.

- CIC has noted that any attempt to postpone or delay the disclosure will block the public discussion on the controversial issue.

- The CIC has also directed the ministry to put in the public domain bio-safety data pertaining to all other GMOs (genetically modified organisms) in the pipeline.

Background:

CIC, in April, had pulled up the environment ministry over its lack of transparency on trials of GM crops and had directed it to make public all information, including bio-safety data, related to the field trials of the GM mustard crop before 30 April. However, instead of furnishing information, the authority requested for two more months. Further, it sought another extension, this time for 90 days.

What has the CIC said?

The CIC said that it finds no sufficient reason to extend the time for another 90 days to give information which the MoEFCC was supposed to disclose on its own under proactive disclosure provisions of the Right to Information Act, 2005.

About the issue:

The GM mustard in question – DMH-11 – has been developed by the Centre for Genetic Manipulation of Crop Plants of Delhi University. If it gets the green light from the environment ministry's GEAC, it will be the first GM food crop to be commercially cultivated in India. Right now, only GM cotton is allowed. GEAC is the environment ministry's regulator for GMOs and transgenic products.

Call to remove IP clauses from trade pact

Ahead of the next round of Regional Comprehensive Economic Partnership (RCEP) trade talks, humanitarian aid organisation Médecins Sans Frontières (MSF) has called for the removal of intellectual property provisions – known as the TRIPS-plus provisions – from the agreement.

Why?

According to the MSF, the TRIPS-plus provisions like patent term extensions and data exclusivity could hinder access to affordable drugs.

About Regional Comprehensive Economic Partnership:

The RCEP is among the proposed three mega FTAs in the world so far – the other two being the TPP (Trans Pacific Partnership, led by the US) and the TTIP (Trans -atlantic Trade and Investment Partnership between the US and the EU).

- The agreement (FTA) 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.

DoNER (Ministry Of Development Of North Eastern Region, North East India) Minister Remembers Tirot Sing's Contribution to Freedom Struggle

The sacrifices of Tirot Sing, the legendary freedom fighter from Meghalaya, were recently commemorated. The function was part of a 15-day campaign undertaken by the Government of India to hold a series of programmes across the country to commemorate the sacrifices of the freedom fighters at their respective places of origin.

About Tirot Sing:

Tirot Sing was one of the greatest freedom fighters to hail from the northeast. In the attempt to prevent the Khasi Hills from falling into colonial hands, Tirot Sing, a **Khasi chief**, had raised the battle cry against the invasive British forces on April 4, 1829, but was eventually captured and defeated. He died in captivity in Dhaka on July 17, 1835.

NHAI collaborates with PFC under Adopt a Green Highway Program

National Green Highways Mission (NGHM) under NHAI has collaborated with Power Finance Corporation Ltd. (PFC) for plantations work on NH 7 in Nagpur region (Borkhedi – Wadner, & Khatara – Kelapur) covering 87 km stretch. Power Finance Corporation Ltd. has provided financial assistance of Rs. 13 crore for plantation and five year maintenance under their CSR funds.

- This marks the first collaboration with the National Green Highways Mission – NHAI under their 'Adopt a Green Highways' Program.

Adopt a Green Highway Program is an initiative by NGHM to engage Corporates, Public Sector Units, Governmental organizations, institutions and individuals under CSR and Public Private Partnership for developing green corridor along NHs.

National Green Highways Mission:

NGHM was launched under the Green Highways Policy, 2015 to provide a holistic vision of developing eco-friendly and green National Highways.

- The mission aims to provide a green canopy along 100,000km of highways and create jobs for 1 million youth.
- The government has made it mandatory to set aside 1% of the total project cost of any

national highway contract to a Green Fund for plantation.

- Main motto of this mission is to help the environment, help local communities, and generate employment by planting trees along all the highways in the country.

India set to seize big opportunity in logistic costs saving through Sagarmala

A new report by Ministry of Shipping has said that Sagarmala project can save up to Rs 35,000-40,000 crore by 2025 per annum for India by optimizing logistics flows for key commodities. The study says that augmenting operational efficiency of ports and optimizing logistics evacuation can be a big boost to Indian trade.

What else the report says?

- Citing the example of maritime nations such as China, South Korea and Japan, the report says that 'port-led development' can be effectively used to save money.
- The project can give boost to Indian trade and help seize the big opportunity of growth in Indian cargo traffic at ports which is estimated to increase to 2.5 bn MMTPA by 2025.
- The study estimates the potential to save around Rs 35,000-40,000 crore per annum by optimizing logistics flows for key commodities by 2025.

Sagarmala:

The Sagarmala is a series of projects to leverage the country's coastline and inland waterways to drive industrial development. Sagarmala, integrated with the development of inland waterways, is expected to reduce cost and time for transporting goods, benefiting industries and export/import trade.

The project is mammoth with 150 initiatives with a total outlay of 14 lakh crore, spread across four broad areas:

- One, modernise port infrastructure, add up to six new ports and enhance capacity.
- Two, improve port connectivity through rail corridors, freight-friendly expressways and inland waterways.
- Three, create 14 coastal economic zones or CEZs and a special economic zone at Jawaharlal Nehru Port Trust in Mumbai with manufacturing clusters to enable port-led industrialisation.
- Four, develop skills of fishermen and other coastal and island communities.

Implementation:

- To implement this, State governments would set up State Sagarmala committees, headed by the chief minister or the minister in charge of ports.
- At the central level, a Sagarmala Development Company (SDC) will be set up to provide equity support to assist various special purpose vehicles (SPVs) set up for various projects.

Quess satellite

China has launched the **world's first quantum satellite- Quantum Experiments at Space Scale, or QUESS**. It is an effort to establish communications that cannot be hacked.

Details:

- In its two-year mission, QUESS is designed to establish 'hack-proof' quantum communications by transmitting uncrackable keys from space to the ground.
- The satellite will be put into Earth orbit around 500 km above ground.

- The craft's main instrument is a "Sagnac" interferometer that is used to generate two entangled infrared photons by shining an ultraviolet laser on a non-linear optical crystal.
- The main goals of QUESS will be to demonstrate quantum key distribution (QKD) between the satellite and two stations on the ground – the Nanshan 25 m telescope at the Xinjiang Astronomical Observatory in western China and the Xinglong Observatory in Yanshan, around 200 km south of Beijing.

How does it work?

The satellite will create pairs of so-called entangled photons – tiny sub-atomic particles of light whose properties are dependent on each other – beaming one half of each pair down to base stations in China and Austria.

- This special kind of laser has several curious properties, one of which is known as "the observer effect" – its quantum state cannot be observed without changing it.
- So, if the satellite were to encode an encryption key in that quantum state, any interception would be obvious. It would also change the key, making it useless.
- If it works, it will solve the central problem of encrypted communications – how to distribute keys without interception – promising hack-proof communications. The encrypted message itself can be transmitted normally after the key exchange.

Background:

Quantum communication boasts ultra-high security as a quantum photon can neither be separated nor duplicated. It is hence impossible to wiretap, intercept or crack the information transmitted through it. Quantum communications technology is nearly

impossible to hack because any interference to transmission of information destroys it.

- **Navroz festival:** It is a Parsi New Year festival. While the Balkans, the Caucasus, the Middle Easterns celebrate the festival on March 21, the first day of the Zoroastrian calendar, in India there is another version of the festival that is followed according to the *Shahanshahi* calendar and falls during the later months of the year. The dates change every year since the calendar doesn't account for leap years. Also known as Pateti, Navroz will be celebrated on August 17th this year in India. The festivities on this day symbolize happiness, harmony and amity for the Parsi community. The time of the festival is decided in Iran and then it is passed on to the entire Zoroastrian population in the world.

- **Regional Maritime Security Course (RMSC):** In continuation of Indian Navy's foreign cooperation initiatives, a Regional Maritime Security Course (RMSC) for officers of the rank of Colonel/ equivalent of Maritime Security Agencies from Friendly Foreign Countries (FFCs) at Naval War College, Goa recently commenced. The module includes International Relations Theory, International Maritime Law, UNCLOS, Energy and Natural Resources Security, Maritime Domain Awareness, Indian Ocean Studies as well as a table top Humanitarian Assistance and Disaster Relief/ Out of Area Contingency exercise. The course would provide a concrete forum for developing common understanding of regional maritime security issues, disseminate the IN perspective on the subject, as well as provide an opportunity for IN officers undergoing the Naval Higher Command Course to interact with the foreign participants, and understand the perspectives of regional navies, on issues of common concern.

More cold chains, food parks to boost farm incomes

The government is planning to set up 100 new cold chain projects at a cost of Rs. 12,000 crore to Rs.13,000 crore.

- The centre has also kicked off the process to invite investors to set up six new mega food parks.
- These measures are aimed at boosting farm sector incomes by establishing farm to fork linkages.

Background:

India loses an estimated Rs.92,000 crore a year due to wasted food. Rs.9,000 crore has been invested in new cold storage capacity in the past two years and this has reduced 10% of the country's food wastage.

Mega Food Parks Scheme:

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.

Aim of the Scheme: The Scheme is aimed at providing modern infrastructure facilities along the value chain from farm gate to the market with strong backward and forward linkages.

What these food parks provide?

- They facilitate the efforts to increase the level of processing of agricultural and horticultural produce, with particular focus on perishables, in the country and thereby to check the wastage.

How it operates?

- The Scheme has a cluster based approach based on a hub and spokes model. It includes creation of infrastructure for primary processing and storage near the farm in the form of Primary Processing Centres (PPCs) and Collection Centres (CCs) and common facilities and enabling infrastructure at Central Processing Centre (CPC).
- The PPCs are meant for functioning as a link between the producers and processors for supply of raw material to the Central Processing Centres.
- CPC has need based core processing facilities and basic enabling infrastructure to be used by the food processing units setup at the CPC. The minimum area required for a CPC is 50 acres.
- The scheme is demand-driven and would facilitate food processing units to meet environmental, safety and social standards.

Implementation and financial assistance:

- Mega Food Park project is implemented by a Special Purpose Vehicle (SPV) which is a Body Corporate registered under the Companies Act. State Government/State Government entities/Cooperatives applying for setting up a project under the scheme are not required to form a separate SPV.
- The financial assistance for Mega Food Park is provided in the form of grant-in-aid at 50% of eligible project cost in general areas and at 75% of eligible project cost in NE Region and difficult areas (Hilly States and ITDP areas) subject to maximum of Rs. 50 crore per project.

Benefits:

- Reduction in post-harvest losses.
 - Maintenance of the supply chain in sustainable manner.
 - Additional income generation for the farmers.
 - Shifting the farmers to more market driven and profitable farming activities.
 - It will be a one stop shop where everything will be available at a single location.
 - As per experts, it will directly employ 10,000 people.
 - Integrated food parks will help reduce supply chain costs.
 - Wastage across the food value chain in India will also be reduced and quality and hygiene improvement to create food products in the country can also be seen.
- more than triple to 175 million in that time, from 50 million in 2015.
- By 2020, India will have an estimated 702 million smartphones in use and mobile phones will emerge as the preferred device for shopping, accounting for 70% of total online shopping.
 - Currently, online ticketing and room booking facilities are used by more than 50 million Indians on a regular basis. By 2020, online travel is estimated to account for 40-50% of all travel-related transactions, up from 12% in 2015. The growth is being driven by demand as a larger, younger population comes online.
 - In 2016, the fintech market will be worth \$8 billion, having grown 20%.

Way ahead:

India's Internet consumption has already exceeded the U.S. to become number two globally. By 2020, the Internet is expected to penetrate deeper in the hinterlands of the country, helping create more opportunities for everyone. This will also present a great opportunity for enterprises to harness the power of the Internet to innovate and scale up operations.

Indians online to hit 730 mn by 2020

As per the report 'The Future of Internet in India', compiled by Nasscom and Akamai Technologies, the number of Internet users in India is likely to more than double to 730 million by 2020. As of December 2015, there were about 330 million Internet users in the country.

Highlights of the report:

- India, which has an Internet user base next only to China, will remain the fastest growing market.
- 75% of the new users would come from rural areas and a majority of new users are expected to consume data in local languages.
- Overall, the e-commerce market in India, which was valued at \$17 billion in 2015-16, is expected to double to \$34 billion by 2020. The number of online shoppers is likely to

ICHR plans encyclopedia of village folklore from across India

ICHR is planning a mammoth encyclopedia of Indian villages complete with its heroes, myth, ballads and history as well as histories of princely states.

Why?

This initiative aims to connect people better with the oral and folk traditions.

What else?

Along with this, ICHR is also planning to conduct a study of the princely States of modern

India and studies to fill the gaps between the Harappan civilisation and the 6 century BC. The idea behind doing the history of princely states is to showcase their contribution and how Indian culture was protected by them.

Is it necessary?

According to historians, the present generations are gradually delinking themselves from their cultural heritage. Hence, they think it's their responsibility to collect, preserve and transmit this knowledge of history for the generations to come.

How it will be carried out?

The students of history will be taken as apprentices, as barefoot historians, and will be encouraged to collect information of the villages around them. For these projects, the ICHR would seek part funding by corporate houses.

Centre accepts some suggestions of collegium

The Central government has accepted some recommendations of the Supreme Court collegium on draft memorandum of procedures for appointment of judges.

Suggestions accepted:

- Lifting the proposed cap on the number of jurists and lawyers for appointment as judges in the Supreme Court. The draft sent to the Chief Justice of India in March had recommended that up to three judges from among jurists and lawyers could be appointed.
- Seniority is now being considered to be the main condition. The government had earlier proposed merit-cum-seniority as the criterion for elevation of judges.

What has not been accepted?

The government has not changed its stand on the proposed clause under which it will have powers to reject any candidate

recommended by the collegium on grounds of public interest and national security. The collegium had earlier rejected the proposal. However, the revised draft proposes that the government will communicate to the collegium the reasons for rejecting any name recommended by it.

Background:

In December 2015, the supreme court, after restoring the collegium system, had directed the Centre to frame a new MoP. The court had directed the government to do this in consultation with the Chief Justice of India, who would in turn take into confidence his four seniormost puisne judges of the Supreme Court and who are part of the collegium.

Later, the Court had raised concerns over some issues in the draft Memorandum of Procedure (MoP). The Supreme Court had asked the government to re-consider these clauses.

Suresh Prabhu announces four new trains

Union Railway Minister Suresh Prabhu has announced four new categories of trains, one for unreserved passengers and three for reserved ones. The introduction of new trains is an attempt to enhance railway services across the country.

New trains announced:

Antyodaya Express: It is a long-distance, fully unreserved, super-fast train service for the common man. It will operate on dense routes.

Humsafar: It is a fully third AC train.

Tejas: It will run at 130 km an hour with local cuisine, Wi-Fi and other amenities on board.

UDAY (Utkrisht Double-Decker Air-conditioned Yatri): It will be overnight train plying on the busiest routes to increase capacity by 40%.

- **SAARC Youth Conference:** The first ever South Asian Association for Regional Cooperation (SAARC) Youth Parliamentarians Conference is being held in Islamabad, Pakistan. The theme of the summit is 'Peace and Harmony for Development'. The goal of the conference is to build bridges between the future leaders of South Asia on a platform that supports continued engagement and cooperation. It seeks to provide an opportunity for the youth and Parliamentarians to apprise respective Government leaders on where the youth of South Asia stands on a vision for the region ahead of the High Level Summit.
- **Sakshi Malik:** She has become the first woman wrestler from India to bag an Olympic medal. She is also the fourth female athlete from the country to earn a medal in Olympics. She won a bronze medal. Overall, this is 25th medal for India in Olympic games.

Draft National Education Policy

Objective

The National Education Policy 2016 envisages creation of a credible education system capable of ensuring

- Inclusive quality education and lifelong learning opportunities for all
- Producing students/graduates equipped with the knowledge, skills, attitude and values that are required to lead a productive life
- Participate in the country's development process
- Respond to the ever changing requirements of a globalizing, knowledge based society
- Develop responsible citizens who respect the Indian tradition of acceptance of diversity of India's heritage, culture and

history as well as promote social cohesion and religious amity

- The vision recognizes the central role of education in India's economic, social, political and cultural development

Key Challenges in India's education system

I. Access and Participation

1. Research highlights the importance of early childhood education. Participation in pre-school education remains low in the country
2. Expanding access to early childhood education and provide equal opportunity to all children to prepare them for formal education is a priority task
3. While nationally the % of out of school children aged 6-13 years has declined since 2000, still the absolute number remains high
4. Currently there is a situation of relatively lower enrolment rates in upper primary and secondary education. Ensuring mobility of students from elementary to primary to secondary to tertiary education is a key challenge. Currently Gross Enrolment Ratio in higher education is 23.6%. The target is to increase it to 25.2% in 2017-18 and to 30% in 2020-21
5. Relatively slower progress in reducing the number of illiterates is also a huge challenge. India currently has the highest number of non literates in the world

II. Quality Issues

- 1) **Poor quality of education leading to unsatisfactory learning outcomes is a huge challenge. At the pre school level the following challenges are there**

- Inappropriate curriculum
- Lack of trained educators
- Ineffective pedagogy
- Resultantly students coming out of pre schools do not have school readiness in terms of cognitive and language domains

2) Biggest challenge remains the unsatisfactory level of student learning. ASER reports, PISA reports all point towards the same. Finding of National Achievement Surveys covering Grades 3, 5, 8 and 10 suggest that learning levels of a significant proportion of students do not measure up to expected learning levels which has a cascading effect on the next stage

3) Factors affecting unsatisfactory quality of school education are

- Large proportion of schools not compliant with prescribed norms and standards
- Students and teachers absenteeism
- Gaps in teacher motivation and training which affects teacher quality and performance
- Slow progress with regards to usage of ICT
- Sub optimal personnel management
- Inadequate attention to monitoring and supervision of performance
- Perceived failure of government schools has triggered entry of a large number of private schools, many of whom also fall prey to the same vices

4) Quality at higher education level - Issues are

- Very few universities and colleges accredited by NAAC are in A grade
- Mushrooming of private players of indifferent quality
- Shortage of well qualified faculty
- Vacancy in faculty positions
- Poor infrastructure in both private as well as public institutions
- Slow renewal of curriculum to align it more closely with skills demanded in a diversified economy
- Inadequate funding for research and development

III Equity

1. Whereas substantial improvement is seen in enhancing enrolment rate in pre-school, still, children from disadvantaged population still lack access to pre school education
2. Percentage of Out of school children (OOSC) has declined since 2000, but the absolute number is still high. Moreover, OOSC still very high among SC, ST and Muslims
3. Children from certain sections like children with disabilities, children in remote location, children belonging to nomadic families, migrant children and other vulnerable disadvantaged group are yet to take full benefit of educational opportunities
4. National Learning Achievement Surveys highlight the following
 - Urban students do better than rural

- Students of private schools do better than those in government schools
 - General and OBC students do better than SC and ST students
3. shortage of teachers. Problem more acute in Eastern part of the country
3. Research, innovation and experimentation in teacher education is very limited

5. Relatively higher gender gap in youth (8.2 % points) and adult (19.5 percentage points) literacy rates

IV Skills and employability

1. India is a young nation with 54% of population below 25 years of age. Thus skilling is necessary to take care of livelihood needs
2. However institutional arrangements to support technical and vocational educational programme quite inadequate

V Curriculum and Assessment

1. Growing disconnect between existing school and higher education curricula
2. Curriculum thrust needed for promoting acquisition of relevant skills by students is missing
3. Assessment criteria in schools focus primarily on rote learning and ability of students to reproduce content knowledge

VI ICT potential not fully tapped by educational institutes in the country

VII Teacher development and management

1. Not equipping teachers with competencies required to cope up with new profile and roles expected of teachers
2. Mismatch between institutional capacity and required teacher supply resulting in

VIII Governance and Management

1. It has assumed complexity especially at tertiary level due to
 - Advent of multiplicity of providers
 - Multiplicity of programmes
 - Multiplicity in modes of financing

IX Research and Development - Following are the reasons for India's poor performance in R&D

1. Limited initiative for upgrading skills of existing faculty
2. Lack of synergies between training and research to promote excellence in both
3. Lack of engagement with institutes around the globe to improve quality of research
4. Lack of creation and facilitation of alliances for research purpose
5. Lack of linkage between research institutions and industry to accelerate process of knowledge development

X Budgetary Constraints

1. Target of 6% of GDP envisaged in National Education Policy 1986 yet to be met

Reforms Suggested

1) Pre-school Education:

1. Pre-school education for children in the age group of 4 to 5 years will be implemented.

2. To strengthen the pre-school education in Anganwadis, steps will be taken in consultation with states to frame curricula and develop learning materials.
 3. State Governments will prepare cadres of pre-primary teachers.
 4. All primary schools will cover pre-primary education.
 5. Appropriate regulatory and monitoring rules and mechanisms will be designed for private pre-schools.
4. Effective steps will be taken to improve teaching standards in schools

2) Curriculum Renewal and Examination Reforms

1. Curricular reforms will be carried out to meet the emerging aspirations and align to national goals of social cohesion, religious amity and national integration.
2. NCERT will undergo a re-orientation to address issues of deteriorating quality of school education and periodic renewal of curricula and pedagogy to move from rote learning to facilitate understanding and encourage a spirit of enquiry.
3. Procedural reforms will be undertaken, such as, doing away with migration certificate, school leaving certificate, etc. in order to encourage mobility of students from one institution to another.

3) Learning outcomes in School Education

1. Norms for learning outcomes will be developed and applied uniformly to both private and government schools.
2. Within the parameters prescribed by the RTE Act, States will have the flexibility to design and plan for the infrastructure keeping in view the local conditions.
3. *The present provisions of no-detention policy will be amended, as it has seriously affected the*

academic performance of students. The no detention policy will be limited up to class V and the system of detention will be restored at the upper primary stage.

4) School Education

1. Each State will undertake a detailed exercise of school mapping to identify schools with low enrolment and inadequate infrastructure.
2. Minimum standards for provision of facilities and student outcomes across all levels in school education will be laid down.
3. Kendriya Vidyalayas (KVs) and Jawahar Navodaya Vidyalayas (JNVs) will be expanded and Kasturba Gandhi Balika Vidyalayas (KGBVs) will be expanded and upgraded

5) Protection of Rights of the Child & Adolescent Education

1. Framework and guidelines for ensuring school safety and security of children will be developed.
2. Every Principal and teacher will be made aware of the provisions of the relevant Acts, Rules, Regulations, etc.
3. The Adolescent Education Programme and National Population Education Programme will be integrated into the curriculum of schools in a phased manner.
4. Adolescent Education will be included in pre- and in-service training programmes of secondary school teachers.
5. Self-learning online programmes on child rights will be developed for the benefit of students, teachers and parents.

6. Schools will engage trained counsellors to confidentially advise parents and teachers on adolescence problems faced by growing boys and girls.

6) Inclusive Education and Student Support

1. Curriculum will cover the issues of social justice and harmony and legal measures in order to avoid social discrimination.
2. With the objective of encouraging merit and promoting equity, a National Fellowship Fund, primarily designed to support the tuition fees, learning materials and living expenses for about 10 lakh students will be created.
3. A zero tolerance approach on gender discrimination and violence will be adopted.
4. There will be dedicated funds for R&D to strengthen disability studies in higher education.

7) Literacy and Lifelong Learning

1. Existing initiatives will be strengthened and curricula revamped with multi-pronged strategies involving Self Help Groups, NGOs, Government etc.
2. The Government will set up an apex body of experts to look into remodelling and strengthening of adult literacy programmes and develop scientific criteria for assessing the learning outcomes of adults in literacy, skill development, prior learning and equivalency for certification which may also facilitate entry into the formal education system.
3. Adult literacy programme will incorporate skill development and digital, financial and legal literacy.

8) Skills in Education and Employability

1. Skill development programmes in school and higher education system will be reoriented
2. A detailed plan for the creation of skill schools for improving employment opportunities for secondary school students in special focus districts will be prepared.
3. Joint certificates by the Sector Skill Council and the School/College authorities to help students take up wage-employment or start their own enterprise.

9) Use of ICT in Education

1. A concerted effort will be made to make ICT an integral part of education across all levels and domains of learning.
2. Online maintenance of all records of a child from the time of admission till the time of leaving the school will be made mandatory.
3. IT reporting systems will be a powerful tool to better school management and performance.

10) Teacher Development and Management

1. A transparent and merit based norms and guidelines for recruitment of teachers will be formulated in consultation with the state governments.
2. All vacancies in teacher education institutions and all positions of head teachers and principals will be filled up.
3. At the National level, a Teacher Education University will be set up covering various aspects of teacher education and faculty development.

4. A separate cadre for teacher educators will be established in every state.

11) Language and Culture in Education

1. All states and UTs, if they so desire, may provide education in schools, upto Class V, in mother tongue, local or regional language as the medium of instruction.
2. Indian culture, local and traditional knowledge will be given adequate space in the school education.
3. Keeping in view special importance of Sanskrit to the growth and development of Indian languages and its unique contribution to the cultural unity of the country, facilities for teaching Sanskrit at the school and university stages will be offered on a more liberal scale.

12) Self -Development through Comprehensive Education

1. Extra-curricular activities like games, yoga, NSS, Bal Sansad will be emphasized upon
2. Funds will be earmarked by the government/ school management for all co-scholastic activities in schools.

13) School Assessment and Governance

1. The framework of school standards with various parameters and indicators to measure school quality, professional competence of teachers, school leadership and the school management, as well as, self-appraisal and performance assessment will be used throughout the country
2. A mechanism will be put in place for accreditation of school boards.
3. Principals/head teachers will be held accountable for the academic performance

of the schools and its improvement.

14) Regulation In Higher Education

1. An independent mechanism for administering the National Higher Education Fellowship Programme will be put in place.
2. A Central Educational Statistics Agency (CESA) will be established as the central data collection, compilation and consolidation agency with high quality statistical expertise and management information system which will be used for predictive analysis, manpower planning and future course corrections.

15) Quality Assurance In Higher Education

1. An expert committee will be constituted to study the systems of accreditation in place internationally. It will draw from the experiences of some of the best practices followed by countries having well performing systems and will suggest restructuring of NAAC and NAB as well as redefining methodologies, parameters and criteria. .
2. Evaluation/ Accreditation details of each institution will be available to the general public through a dedicated website, to enable students and other stakeholders to make informed choices.

16) Open and Distance Learning & MOOCs

1. The National Institute of Open Schooling (NIOS), in collaboration with Ministry of Skill Development & Entrepreneurship, will redefine itself to address the large potential demand for vocational education. The issues of management, monitoring and oversight of NIOS will be addressed appropriately.

2. A quality assurance mechanism for accreditation of all universities/institutions offering ODL / MOOCs will be put in place to ensure quality, promote, innovation and reshape and modernize the ODL / MOOCs courses and programmes.

17) Internationalization of Education

1. Selected foreign universities, from the top 200 in the world, will be encouraged to establish their presence in India through collaboration with Indian universities.
2. In order to increase acceptability of Indian students abroad and to attract international students, Indian HEIs will be encouraged to work towards internationalization of curricula aligned with international levels so as to make it globally compatible with best ranked institutions of the world.
3. Internationalization will be included as one of the components for allocating additional financial resources to government-funded HEIs.

18) Faculty Development in Higher Education

1. A task force of experts will be set up to study the recruitment, promotion and retention procedures, followed by internationally renowned universities and institutions and suggest measures to promote intellectual and academic excellence in HEIs.
2. A national campaign will be launched to attract young talent into the teaching profession. In order to attract young talent into teaching profession, a career growth of research students, such as M.Phil & Ph.D scholars, will be created.
3. A mechanism of assessment of academic performance of faculty including peer review will be put in place so as to ensure academic accountability of public-funded institutions.

19) Research, Innovation and New Knowledge

1. A clear reorientation of research agenda of National University of Educational Planning and Administration (NUEPA) will be undertaken to reflect actual issues on the ground.
2. Steps will be taken to promote generation of new knowledge and their applications and introduction of these new domains into the curricula of higher education to consolidate and strengthen India's position as a soft power.
3. In order to promote innovation, creativity and entrepreneurship, 100 more incubation centres will be established in HEIs over a period of next 5 years.
4. International collaborations and networks will be promoted for developing human resources required to sustain new knowledge with special focus on interdisciplinary research and studies.

20) Financing Education

1. The government will take steps for reaching the long pending goal of raising the investment in education sector to at least 6% of GDP as a priority.
2. Instead of setting up new institutions, which require huge investments, priority of the Government will be to expand the capacity of existing institutions.
3. In order to encourage excellence and efficiency, performance-linked funding of higher education institutions will be implemented.

New steps to enhance transparency in Power Sector

In a bid to enhance transparency in power transmission sector of the country, the government has launched the '**TARANG' Mobile App, 'e-Trans' & 'DEEP' e-bidding web portals**. These are developed by Rural Electrification Corporation Transmission Projects Company Limited (RECTPCL), a subsidiary of REC Ltd.

- These measures are aimed at enhancing ease, accountability & transparency and would boost confidence of investors in power transmission sector. Better price discovery shall ultimately benefit the power consumers in India.

Details:

TARANG:

It is a powerful monitoring tool that tracks upcoming transmission projects and monitor the progress of Inter-State & Intra-State transmission systems in the country, being developed through Regulated tariff mechanism as well as Tariff Based Competitive Bidding(TBCB) route. TARANG shall also include status of stalled/delayed transmission systems in country which would enable the stakeholders viz. Ministry of Power, State Governments, all private sector transmission developers and PSUs like Power Grid Corporation of India Ltd., for expeditious completion of such projects. Green Energy Corridors, an important component of our renewable energy mission, would also be monitored through TARANG.

'e-Trans':

It is a web platform for e-bidding and e-reverse auction for Tariff Based Competitive Bidding (TBCB) in transmission projects. Till date transmission sector providers have been participating in transmission bids through

manual mode. With e-Trans, the interface will be electronic.

'DEEP (Discovery of Efficient Electricity Price) e-Bidding' portal:

It is for medium term (1-5 years) purchase of power. The Portal will provide a common e-bidding platform with e-reverse auction facility to facilitate nation-wide power procurement through a wider network so as to bring uniformity and transparency in the process of power procurement.

BARC develops portable kit for detection of Chromium contamination of water

BARC has developed a simple, user friendly, quick and cost effective kit for onsite determination of **Hexavalent Chromium Cr(VI)**, which meets **IS10500** as well as **EPA** criterion.

- It provides the much needed solution to measure the level of Chromium contamination in drinking water and tap water, lakes, rivers as well as ground water.

How is it measured?

The procedure involves adding a specified amount of specific reagents to the water sample and identifying the developed colour. The colour develops within 5 minutes and the distinction can be made with naked eye. For ease of comparison a colour chart is provided with the kit.

Benefits of this kit:

- With this, water samples can be immediately categorized as being safe or toxic for drinking from Chromium(VI) point of view.
- The kit provides several advantages including on site detection and instantaneous results, elimination of use of sophisticated instruments for analysis, low

investment on infrastructure for production of the kit, easy availability of raw materials and very good accuracy for the intended purpose.

Background:

Chromium is widely used in various industries like leather, steel, chrome plating, paint manufacturing, wood preservation etc. Untreated effluents from these industries cause widespread contamination of water.

Concerns:

Chromium in the environment primarily exists as Trivalent Chromium Cr(III) and Hexavalent Chromium Cr(VI). The latter is toxic and the World Health Organization has classified it as carcinogenic and can cause stomach ulcers and cancers and severe damage to kidneys and liver.

- As per Indian standard IS10500 for drinking water, the maximum permissible concentration of Cr(VI) in drinking water is 50 microgram per litre. The US Environmental Protection Agency (EPA) recommends a still lower permissible concentration of 10 microgram per liter.
- Detection of Cr(VI) at such low levels is not only technically challenging but also expensive and time consuming since it involves collection of water samples from affected areas, transport to laboratory, storage and finally analysis.

Web Portal for Star Rating of Major Mineral Mines

The Ministry of Mines through Indian Bureau of Mines has developed a template for Scheme of Star Rating of Mines. The main objective of this system is to bring all mines to a minimum standard of Star Rating in the shortest possible time frame to adopt sustainable practices.

The star rating will be based on the following parameters:

- Scientific and systematic mining to mitigate environmental impact.
- Addressing social impacts of resettlement and rehabilitation of mining affected people.
- Local community engagements and welfare programmes for socio-economic development of local community.
- Progressive and final mine closure to ensure for restoration of mined out land in better conditions than original.
- Adoption of international standards for mining operations and reporting.

Details:

- Based on the performance of the mining leases, a one to five star rating would be given to the mines.
- The Star Rating will be done initially for mines of major minerals.
- The positive impact of getting higher Star Rating will drive miners to quickly adopt sustainable mining practices.
- The Scheme of Star Rating will be a vital step for ensuring compliance of environmental protection and social responsibility by the mining sector.

The main advantages of the Star Rating of Mines will be:

- Comprehensive mitigation of environmental impacts on land, air and water by mining activities.
- Collation of various technical, environmental and social data of the mining sector at one platform by IBM, which would be utilised to enable better management

and monitoring of the compliance of various conditions laid down by statutory authorities for mining.

- In addressing cumulative impacts in mining areas through coordinated and collective action in the long run by helping in formulation of Comprehensive Regional Plans'- a robust Environment & Social Management framework.
- Availability of the information on mining as well as the conservation activities in public domain to enable greater transparency to enable effective participation of stakeholder and speedy resolution of conflicts.
- Reduced delays in obtaining various clearances (environmental, forest, mining plan, etc.) for mines. Self-certification to be allowed for the approvals for scheme of mining.
- The progressive and final mine closures will be monitored to ensure that the lessee leaves the area after proper management of any adverse impact over the mined area.
- Encourage adoption of highest standards and sharing and good practices.

BRO Launches Ambitious Tree Plantation Drive

The Border Roads Organisation (BRO), under Ministry of Defence, has launched a massive tree plantation drive in the Northern & Eastern states of India.

- This is one of the biggest ever tree plantation drive undertaken by the BRO, organised with the aim to protect the ecology and increase the green cover along the border areas of the Country.

About BRO:

- The Border Roads Organisation (BRO) develops and maintains road networks in India's border areas and friendly neighbouring countries.
- It is staffed by officers and troops drawn from the Indian Army's Corps of Engineers, Electrical and Mechanical Engineers, Army Service Corps, Military Police and army personnel on extra regimental employment.
- Officers from the Border Roads Engineering Service and personnel from the General Reserve Engineer Force (GREF) form the parent cadre of the Border Roads Organisation.
 - Currently, the organisation maintains operations in twenty-one states, one UT (Andaman and Nicobar Islands), and neighbouring countries such as Afghanistan, Bhutan, Myanmar, and Sri Lanka.
- The BRO operates and maintains over 32,885 kilometres of roads and about 12,200 meters of permanent bridges in the country.

Sunshine, seaweed help to break down dye waste

The researchers have developed a **photocatalyst** using titanium dioxide doped with **red seaweed polymer carrageenan** to degrade the dyes. With this photocatalyst, scientists have been able to completely degrade three industrial dyes – methyl orange, methylene blue and reactive black-5 – in the presence of sunlight.

Details:

Titanium dioxide has conventionally been used for photocatalytic degradation of industrial dyes, but it takes a long time to degrade dyes. So the researchers doped titanium dioxide

nanoparticles with sulphur and carbon by treating it with carrageenan.

The nanocomposite was found to behave as an excellent photocatalyst that helped degrade industrial dyes quickly in a single-step process. The energy required to activate the catalyst is less when it is doped and this makes the dye degradation faster. Visible light is mainly responsible for degradation.

Significance of nanocomposites:

The nanocomposites are thermally stable and can be reused up to six times with the degradation efficiency remaining at over 97%. The nanocomposite photocatalyst can safely and completely treat harmful dyes in an eco-friendly and cost-effective manner.

Background:

Despite stringent environmental regulations, a comprehensive method of treating industrial dye is not available. The methods available are expensive and do not completely break down the dye molecules to non-toxic constituents but merely concentrate the contaminants. Annually, more than 500 tonnes of non-degradable textile colour wastes are being disposed of in natural streams without adequate treatments.

Way ahead:

The researchers are planning to conduct studies during winter to assess the photocatalyst's ability to break down the dyes when bright sunlight is not available.

U.S. set to hand over Internet's naming system to ICANN

The U.S. is set to cede power of the Internet's naming system to a non-profit organisation on October 1, ending the almost 20-year process to hand over a crucial part of the Internet's governance.

Details:

- The U.S. will give up its power fully to Los Angeles-based ICANN (Internet Corporation for Assigned Names and Numbers), a non-profit organisation.
- The terms of the change were agreed upon in 2014, but it was not until now that the U.S. said it was finally satisfied that ICANN was ready to make the change.

DNS:

The Domain Naming System, **DNS**, is one of the Internet's most important components. It pairs the easy-to-remember web addresses with their relevant servers. Without DNS, one would only be able to access websites by typing in its IP address, a series of numbers such as "194.66.82.10".

Background:

The Internet Corporation for Assigned Names and Numbers (ICANN), in March 2016, submitted the plan for the global stewardship of the internet to the US government for review.

- The plan aims to maintain Internet governance under a "multi-stakeholder" model which avoids control of the online ecosystem by any single governmental body.
- The plan is the result of an inclusive, global discussion among representatives from government, large and small business, technical experts, civil society, researchers, academics and end users.
- It provides a comprehensive package to transition the US Government's stewardship of the internet's key technical functions, called the IANA (Internet Assigned Numbers Authority), and proposes ways to enhance ICANN's accountability as a fully independent organization.

About the Internet Corporation Assigned Names and Numbers (ICANN):

ICANN is the global body that oversees operation and administration of the Internet domain name system. It was formed in 1998.

- It is a not-for-profit partnership of people from all over the world dedicated to keeping the Internet secure, stable and interoperable. It promotes competition and develops policy on the Internet's unique identifiers.
- ICANN doesn't control content on the Internet. It cannot stop spam and it doesn't deal with access to the Internet. But through its coordination role of the Internet's naming system, it does have an important impact on the expansion and evolution of the Internet.
- It is responsible for coordinating the maintenance and methodologies of several databases, with unique identifiers, related to the namespaces of the Internet – and thereby, ensuring the network's stable and secure operation.
- ICANN is governed by an internationally diverse Board of Directors overseeing the policy development process. ICANN's President directs an international staff, working from three continents, who ensure that ICANN meets its operational commitment to the Internet community.

Global Innovation Index: India moves up to 66th rank this year

Global Innovation Index for the year 2016 has been released. The annual index – released by WIPO, Cornell University, and the multi-national business graduate school INSEAD – has been ranking world economies since 2007 according to their innovation capabilities using more than 80 indicators, including education,

R&D, patent filings, knowledge and technology inputs and institutions.

Highlights:

- India scored a major improvement in its Global Innovation Index ranking this year, moving up to the 66th place from 81 in 2015. India's better performance in the latest index readings was due to its strengths in tertiary education, software exports, corporate R&D and market sophistication.
- Among middle income countries, India (25) came second after China (17) in innovation quality, overtaking Brazil (27).
- China figured at the 25th position (29 in 2015), the only middle-income country in the top 25.
- The report said India was starting to excel in ICT and creative goods exports, setting a good example of how policy was improving the innovation environment.
- In the sub-index for government effectiveness, which captures the perceptions of quality of civil services and degree of their independence from political pressures and the quality of policy formulation and implementation, India is ranked at 82, the same as last year.
- India has also moved down in the rule of law sub-index, from 63 last year to 66 now. The index points at lowered perceptions regarding the quality of contract enforcement, property rights, the police, and courts, as well as the likelihood of crime and violence.
- In the infrastructure indicator, India has stayed put in the 87th rank, not having progressed in the use of information technology.
- Overall, Switzerland emerged as the global leader followed by Sweden, the UK, the US

and Finland. Switzerland had ranked first in the 2015 index as well.

- **Airlander 10:** It is the world's largest and longest aircraft. It recently embarked on its maiden flight in central England. It is a hybrid airship made by Hybrid Air Vehicles in United Kingdom. Airlander 10 is a partly plane and partly airship filled with helium gas. It can stay airborne for more than two weeks unmanned
- **MoU between India and Bangladesh:** Indian Oil Corporation Ltd (IOCL) and the Roads and Highways Department of People's Republic of Bangladesh have signed a Memorandum of Understanding. The MoU enables IOCL to send its trucks carrying Motor Spirit, High Speed Diesel, Superior Kerosene Oil & Liquefied Petroleum Gas from Meghalaya to Tripura via territory of Bangladesh. The validity of this facility is till end September, 2016. Both sides have also agreed to extend the transit facility for a further short period on need basis.
- Hong Kong, New Zealand, Japan, Macao, Australia and Singapore topped the list of 53 countries covered in the report.
- Presently, more than half of the global fixed broadband subscriptions are from Asia and the Pacific (52.3%). The report pointed out that this was a dramatic increase from 2005 when subscriptions in the ESCAP region merely constituted 38.1% of the global total fixed broadband subscriptions. However, the subscriptions per 100 inhabitants in the ESCAP region is still behind Latin America and the Caribbean, and far lower than Europe and North America.
- Fixed broadband penetration in Asia and the Pacific is even below the world's average of 11.2 subscriptions per 100 inhabitants in 2015.

India ranks 39th in Asia Pacific on fixed broadband

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), in its report, has placed India at 39th position in terms of fixed broadband adoption among Asia Pacific countries. The report is named- 'State of ICT in Asia and the Pacific 2016: Uncovering the Widening Broadband Divide'.

Highlights:

- India ranks lower than countries such as Bhutan, Sri Lanka and Bangladesh in fixed broadband subscriptions per 100 inhabitants in ESCAP countries in 2015.
- According to the report, 1.3% of population in India subscribed to fixed broadband service in 2015.

Prices of essential drugs capped

NPPA has fixed/revised ceiling prices of 22 scheduled formulations of Schedule-I under Drugs (Price Control) Amendment Order, 2016 and retail price of 13 formulations under DPCO, 2013. 22 essential drugs include drugs used for treatment of cancer, HIV, bacterial infections and malaria among others.

Background:

The calculation for essential drugs is based on the simple average of all medicines in a particular therapeutic segment with sales of more than 1%. The government had notified the DPCO 2013, which covers 680 formulations, with effect from 15 May, 2014, replacing the 1995 order that regulated prices of only 74 bulk drugs.

National Pharmaceutical Pricing Authority (NPPA)

NPPA was established, inter alia, to fix/ revise the prices of controlled bulk drugs and formulations and to enforce prices and availability of the medicines in the country,

under the Drugs (Prices Control) Order, 1995. The organization is also entrusted with the task of recovering amounts overcharged by manufacturers for the controlled drugs from the consumers.

Functions of National Pharmaceutical Pricing Authority:

- To implement and enforce the provisions of the Drugs (Prices Control) Order in accordance with the powers delegated to it.
- To deal with all legal matters arising out of the decisions of the Authority.
- To monitor the availability of drugs, identify shortages, if any, and to take remedial steps.
- To collect/ maintain data on production, exports and imports, market share of individual companies, profitability of companies etc, for bulk drugs and formulations.
- To undertake and/ or sponsor relevant studies in respect of pricing of drugs/ pharmaceuticals.
- To recruit/ appoint the officers and other staff members of the Authority, as per rules and procedures laid down by the Government.
- To render advice to the Central Government on changes/ revisions in the drug policy.
- To render assistance to the Central Government in the parliamentary matters relating to the drug pricing.

Poor air quality across 41 cities in 2015, says CPCB survey

According to a latest analysis released by the Central Pollution Control Board (CPCB), in 2015, 41 Indian cities with a million-plus

population faced bad air quality in nearly 60% of the total days monitored.

- Days wherein all monitored parameters like sulphur dioxide, nitrogen dioxide, and particulate matter are within the prescribed norms were considered good days while remaining monitoring days when value of one or the other parameter exceeds the norms were categorised as bad days.

Details:

- The three cities – Gwalior, Varanasi and Allahabad – which didn't have even one single good air quality day was followed by Raipur with 2%, Lucknow with 3%, Delhi and Ghaziabad with 4% each among all the days when their air quality was monitored.
- Among the best, Coimbatore had 99% of good air quality days, Rajkot had 96%, Ahmedabad and Madurai 93% each, Vishakhapatnam, Surat and Chennai with 92% each.
- Most cities recorded high percentage of good days during monsoon season and low percentage of good days during winter season. Coastal cities have recorded higher percentage of good days compared to the land locked cities. Southern and western cities recorded higher percentage of good days.

Way ahead:

There is a need for strong national air quality planning strategy so that each and every city has a clear pollution source-wise plan which is to be implement in a time bound manner. Otherwise its implications on public health are going to a very serious.

- P.V. Sindhu is the first Indian woman to receive Olympic Silver medal. She was defeated by Spanish player and world number one Carolina Marin. She received international attention as she broke into the

Top 20 in the Badminton World Federation rankings released on 21 September 2012. On 10 August 2013, Sindhu became the first ever Indian women's singles player to win a medal at the 2013 World Championships. On 30 March 2015, she received India's fourth highest civilian honor, the Padma Shri. On 18 August 2016, at the 2016 Summer Olympics, she became the first Indian to reach the finals in the Badminton event of an Olympic games after beating Nozomi Okuhara of Japan in the semi-finals. She subsequently won the Silver medal at the 2016 Summer Olympics and became the first Indian shuttler to win a Silver medal and the youngest Indian overall to make a podium finish in the Olympics. She also became the second Indian female shuttler to win an Olympic medal after Saina Nehwal's Bronze medal at 2012 Summer Olympics at London. (Wikipedia)

- **Project Alloy:** It is a virtual-reality headset unveiled by Intel recently. The head-mounted display consists of a set of goggles that contain the computing power needed to run the headset. The headset is a completely standalone device, with no need to hook up to a computer or external sensors, so wearers can move around and explore virtual environments with total freedom. The headset uses Intel's RealSense cameras, which have depth-sensing capabilities, to allow, without the need for additional sensors, objects such as the user's hands to be tracked and entered into the virtual world displayed within the goggles. The device creates mixed reality, which drags real-world objects into the virtual realm using 3D cameras.
- **XMU-MP-1:** It is a drug discovered by Chinese scientists, which can promote repair and regeneration in the liver, intestines and skin. In the future, the drug may well do away the need for organ transplant or complex biomaterial and cell

therapies. The XMU-MP-1 has been proven to inhibit the activity of MST1/2, the central component of this pathway and promote cell growth in four different mouse models with acute and chronic injuries, including acetaminophen-induced injury, which is a common cause of liver failure worldwide.