

CURRENT AFFAIRS

20TH AUGUST TO 31ST AUGUST 2016

INDIA'S ENTRY TO NSG

- The annual plenary session of NSG ended without taking any decision on India's application for membership. Only 32 countries out of 48 supported India but the NSG's actions are governed by consensus not by majority. China emphasized on the admission criteria of NSG in which one of the criteria is signing the NPT i.e. must, as India is not a NPT state so according to China & some other member countries India can't be admitted to NSG.

About NSG

- Is a group of nuclear supplier countries that seeks to prevent nuclear proliferation by controlling the export of materials, equipments and technology that can be used to manufacture nuclear weapons.
- NSG was founded in response to the Indian nuclear test in May 1974.
- NSG has 48 members.
- Other groups and agreements that regulate the conventional, nuclear, biological and chemical weapons and technologies.
 - i. MTCR
 - ii. THE AUSTRALIAN GROUP.
 - iii. WASSENAAR ARRANGEMENT

i. **MTCR (MISSILE TECHNOLOGY CONTROL REGIME)**

Aims – to limit the spread of ballistic missiles and other unmanned delivery system that could be used for chemical, biological and nuclear attacks.

- 35 members (India recently joined the regime)

- To restrict the exports of missiles & weapon of mass destruction.

ii. **THE AUSTRALIAN GROUP**

- An informal arrangement

- Aims to allow exporting transshipping countries to minimize the risk of assisting chemical and biological weapon proliferation.

- Not legally binding to the member rarely on shared commitment.

- All states participating in the Australian Group are parties to the chemical weapons conventions & biological weapon convention and strongly support efforts under those conventions to rid the world of Chemical and Biological Weapons.

iii. **WASSENAAR ARRANGEMENT**

- Is a multilateral export control regime (MECR) with 41 participating states including many former COMECON (Warsaw Pact) countries

- Main purpose is to regulate Export of conventional arms & Dual-Use Technologies.

- Contributes to regional and international security and stability.
- Promotes transparency and greater responsibility in transfers of conventional arms and dual use of goods and technologies.
- Complements and reinforces the control regimes for weapons of mass destruction and their delivery system.
- Not directed against any state or group of states.
- Use export controls as a means to combat terrorism.

NASA – REx

- On 8th Sept. NASA will launch the OSIRIS Rex craft that will travel to the asteroid BENNU to know how life began on earth.
- It's a seven year mission.
- OSIRIS Rex is a 2110 kg fully fuelled spacecraft that will survey BENNU to locate the most promising sample sites and collect about 60-2000 gm of surface material with a robotic arm.
- It will carry a system consisting of three cameras to observe BENNU, a scanning light to measure distance between the craft and BENNU's surface, an instrument to investigate mineral abundance, an infrared laser to identify mineral and organic material and a robotic arm with a sampler head –to collect sample from BENNU's surface.

THE BENNU ASTEROID

*Rotation period – 4.3 hours .

* Orbital period – 1.2 years.

*Avg. Speed – 101,400 KPH.

*Earth Approach – Comes close to earth every 6 years.

* Polar diameter – 510m.

COCHLEAR IMPLANT

The occasion 70 years of independence, Ministry of Social Justice and Empowerment under the Department of Empowerment of Persons with disabilities introduces the Cochlear Implant.

What is a cochlear implant?

The cochlear implant is an electronic device surgically implanted inside the cochlear to facilitate hearing. Cochlear implants have been found to be beneficial for children with severe to profound hearing loss.

Who all can benefit from Cochlear Implant

- A child in the age range of 1-5 years having congenital or at birth hearing loss or post lingual deafness.
- A child with bilateral severe to profound sensorineural hearing loss.
- A child should have used the hearing aid for at least 3 to 6 months with no observable benefit from the amplification and speech and language intervention.

What are the advantages of a Cochlear Implant?

- The children with cochlear implant with post operative rehabilitation programme show clear benefit and progress in their speech and language skills.
- It provides hearing to understand speech at normal intensity level.
- It facilitates and develops ability of the child to understand speech without lip reading.
- It helps in hearing telephone, alarms, mobile ring tones and speech conversations of others.
- The child develops better voice quality, prosody, rhythm and intelligibility in production of speech.

METHANDIENONE

- Is more commonly known as Dianabol, Anabol or as DBol
- Created in 1960s Germany as an anabolic steroid.
- Popular in the body building world
- It has androgenic properties and progestogenic activity
- Banned substance under WADA.

About NADA (National Anti Doping Agency)

- International Olympic Committee (IOC) was responsible for promotion of sports and along with Anti-Doping in sports prior to the constitution of the world Anti Doping Agency in 1999, in accordance with the UNESCO Convention.
- 1st world conference on Doping in sports was held in Lausanne, Switzerland in early 1999 and led to the creation of WADA later that year 1999.
- Government of India is one of the founding members of WADA (1999-2002).
- WADA, which sets out standards in the fight against doping in sports, adopted the WADA code on 5th March 2003 at Copenhagen, Denmark.
- India is one of the state parties signed the Copenhagen Declaration on Anti Doping in Dec. 2004.
- In terms of code, NADA was registered as a Society on 24-11-05
- NADA accepted the World Anti Doping Code on 7th March 2008 and framed the Anti Doping Rules (ADR) of NADA in conformity with the WADA's code.

ACCESSIBLE INDIA CAMPAIGN (SUGAMYA BHARAT ABHIYAAN)

- UN convention on the Rights of Persons with disabilities (UNCRPD) casts an obligation on all signatory governments to take appropriate measure to ensure to persons with disabilities access on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communication technologies and systems and to other facilities and services open or provided to the public, both in urban and rural areas.
- India is a signatory to the UNCRPD. and adopted the Incheon strategy to 'Make rights real' for persons with disabilities in Asia & Pacific. In 2012.
- The Incheon strategy builds on the UNCRPD and provide the first regionally agreed disability inclusive "Development Goals".

- Persons with Disabilities (Equal opportunities Protection of Rights and full participation) Act 1995 categorically provides for non-discrimination in participation.
- Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment, has formulated the Accessible India Campaign (Sugamya Bharat Abhiyan) as a nation wide campaign for achieving universal accessibility for PwDs.
- Central and state governments to meet accessibility standards for persons with disabilities by March 2018.
- Recently accessible India Campaign moved further towards an Accessible Digital India by introducing SugamyaPustakalya.

SUGAMAYA PUSTKALAYA

- Is an online platform that makes content accessible to disabled people.
- Has been created by Department of Empowerment of Persons with Disabilities (Divyangain), Ministry of Social Justice and empowerment in collaboration with member organizations of Daisy forum of India .
- Aims to Integrate libraries across India and Globe, including the largest international library 'Bookshare'.

MSME SECTOR

Major challenges:

- i. Acute shortage of credit availability – MSME demand of Rs. 26 lakh crore of loans, credit availability is only for Rs. 11.10 lakh crore.
- ii. Dependency of majority of enterprises one upon informal sources of financing.
- iii. Lack of collateral as an impediments towards lending to small enterprises.

Measures taken by RBI

- i. In order to ease of flow of credit, RBI is starting to put in place a framework for accreditation of credit counselors who are expected to service as facilitators and enablers for micro and small entrepreneurs. These credit councilors will assist the borrowers in preparing their project reports and also help banks to make better credit decisions.
- ii. Peer to peer lending (P2P) – Peer to Peer lending has great potential as an alternative form of low cost finance as it can reach to the needy where formal sources are unable to reach or unwilling to lend.
RBI will issue final guidelines for peer to peer lending.
- iii. Setting up of a movable assets registry, which when mature would have a multiplier effect in the lending sector.

Movable asset: as opposed to fixed assets such as land or buildings, often account for most of the capital stock of private firms and comprise an especially large share for micro, small and medium size enterprises.

Movable assets registry has been set up by the CERSAI (central Registry of securitization Asset Reconstruction and security interest of India) in coordination with the government and RBI.

- iv. Electronic Bill Factoring Exchanges for faster payment of bills.
 - It will electronically accept and settle bills so that MSMEs could cash their receivable without delay.
 - For faster payment of bills to MSME, RBI has licensed three entities for operating the Trade Receivables discounting system (TreDS), which would commence operations in the current fiscal.
 - The system would facilitate the financing of trade receivables of MSME enterprises from corporate and other buyers, including govt. departments through multiple financiers.
- v. To increase formal lending facilities to the MSME sector, the RBI has given license to 10 entities for small finance bank that would mainly focus on lending to unserved and under served sections including small business units small and marginal farmers, micro and small industries and unorganized sector entities.

These small finance banks have to extend 75% of its adjusted net bank credit to priority sectors, while at least 50% of their portfolio should contribute loans and advances of upto Rs. 25 lakh.

- MSME sector is a network of 51 million enterprises providing employment to 117.1 million persons and contributing 37.5% of India's GDP.

**EVEN AFTER A DECADE OF SACHAR COMMITTEE REPORT NOTHING HAS
CHANGED FOR MUSLIMS**

- Former JUSTICE SACHAR COMMITTEE submitted his report on the educational backwardness of the Muslim and its impact on their employment status.
- IPS proportion of the Muslims has come down from 4% to about 3.2% and their representation in IAS has gone up marginally.
- Panel noted just 3.5% of Muslims were graduates and the literacy level of the community at 59% i.e. below the national average.
- According to the Panel situation of the Muslims community was not much better than that of the Dalits and sometimes much worse than that of the OBC.

The reasons for the Muslim's backwardness and alienation are mainly two:

- i. Upper class Muslims in British India, who could have been the harbingers of the community modernity, left India after Partition.
- ii. Muslims who were left behind were not only impoverished but also victims of violence, ghettoization, etc.

Suggestions:

- i. One could be the gradual implementation of the SACHAR committee recommendations.
- ii. Restructuring reservation in government services on the basis of family income as of now, reservation cannot be on the basis religion.

About SACHAR committee Report

On March 9, 2005, a high level committee constituted to prepare report on the social, economic and educational status of the Muslim community of India.

The member high level committee, chaired by Justice SACHAR committee submitted its final report to the Prime Minister on Nov. 17, 2006.

The report frames the issues related to identity, security and equity.

Main Recommendations

The committee made a number of recommendations to address the status of the Muslim community in India. Including

- Set up an equal opportunity commission to look into grievances of deprived groups like minorities.
- Create a nomination procedure to increase participation of minorities in public bodies.
- Establish a delimitation procedure that does not reserve constituencies with high minority population for SCS.
- Increase employment share of Muslims, Particularly where there is great deal of public dealing. Work out mechanisms to link Madrasas With higher secondary School board.
- Recognize degrees from Madrasas for eligibility in defence, civil and banking examination.

MONITORY POLICY COMMITTEE (MPC)

- It's a six member committee.
- Will maintain inflation target.
- Meet four times a year.
- Out of 6, 3 members will be nominated by the government.
- No government official will be nominated to the MPC.
- RBI Governor will chair the committee.
- Governors will not enjoy a veto power but will have a casting vote in case of time.
- Members will be appointed for 4 years and no reappointment.
- Other 3 members will be Governor who will be ex-officio chairperson, Deputy Governor of RBI (in charge of Monetary Policy) and executive director of Central Bank.

INFRASTRUCTURE FUNDING

- Institutional lenders including world Bank, Asian development Bank and among others are booking to team up with Public sector banks (PSBs) to fund India's cash starved infrastructure and renewable energy sectors.
- World Bank disburses loans worth \$3 billion to the infrastructure sector this year.
- The World Bank, ADB, BRICS Bank and others have lined up close to \$2 billion to be pumped into the renewable sector alone.
- Bank will not be able to use those funds for any other purpose.
- PSBs can lend this money at the Marginal cost not based lending rate (MCLR).
- MCLR is the benchmark lending rate.
- Both power and infrastructure are deemed risky by domestic banks which has given the high value of stressed assets.

SURROGACY BILL 2016

A draft law that aims to make surrogacy "legal and transparent" in India is cleared by the Cabinet. The surrogacy Bill, 2016, seeks to protect the rights of both the surrogate and the child. The Bill aims to prevent exploitation of women in rural & tribal areas. The government has announced that it will take up the Bill in the winter session of the parliament later this year.

About the Surrogacy Bill 2016

- i. Surrogacy Bill 2016 will legalize surrogacy in India.
- ii. Under the proposed framework, commercial surrogacy will be banned in the country.
- iii. Only Legally wedded Indian couples with proven infertility will be allowed to take help of surrogate mothers.
- iv. The Bill also makes it illegal for any foreign national to seeks surrogate mothers in India (even overseas Indians are barred).
- v. Parents will only be allowed to meet medical bills of surrogate mothers and no other payments can be made.
- vi. Unmarried couples, single parents, live-in partners & homosexuals cannot opt for surrogacy.
- vii. The new framework also envisions national regulator to oversee clinics that offer surrogate services.
- viii. The Bill also has guidelines for regulating Clinics and hospitals that allow surrogacy.
- ix. Bill also outlines rights of surrogate mother own their infants and simplifies issues of parentage.
- x. It is proposed that candidates for surrogate will be limited to close relatives only & not others.
- xi. The Bill also has provisions for providing legal aid to surrogate mothers.
- xii. Surrogacy regulation board will be set up at Centre and State level.

INSTALLING RFID

SC urged Delhi govt. for installing RADIO FREQUENCY IDENTIFICATION DEVICE (RFID) to levy entry cess, along with a toll tax on commercial vehicles entering to the capital.

Environment compensation charge collected from commercial vehicles entering Delhi can itself be used to fund RFID installation at the 13 entry points to capital.

RADIO FREQUENCY IDENTIFICATION DEVICE

Radio frequency identification (RFID) is a form of wireless communication that uses radio waves to identify and track objects, animals, or people. It digitizes it for the modern world providing the ability to:

- Uniquely identify an individual item beyond just its product type.
- Identify items without direct line-of-sight.
- Identify many items (up to 1,000s) simultaneously.
- Identify items within a vicinity of between a few centimeters to several meters.

An RFID system has *readers* and *tags* that communicate with each other by radio. RFID tags are so small and require so little power that they don't even need a battery to store information and exchange data with readers. This makes it easy and cheap to apply tags to all kinds of things that people would like to identify or track.

RFID can help:

- Automate inventory and asset-tracking in healthcare, manufacturing, retail, and business sectors.
- Identify the source of products, enabling intelligent recall of defective or dangerous items, such as tainted foods, defective toys, and expired or compromised medication.
- Prevent use of counterfeit products in the supply chain.
- Improve shopping experience for consumers, with fewer out-of-stock items and easier returns.
- Provide visibility into the supply chain, yielding a more efficient distribution channel and reduced business costs.
- Decrease business revenue lost to theft or inaccurate accounting of goods.
- Improve civilian security through better cargo monitoring at ports.
- Wirelessly lock, unlock and configure electronic devices.
- Enable access control of certain areas or devices.

Whatever the application, RFID has the potential to increase efficiency of operations, improve asset visibility and traceability, decrease reliance on manual processes, reduce operations costs, and provide useful data for business analytics.

DENGUE

Dengue fever is transmitted by the bite of an Aedes mosquito infected with a dengue virus. The mosquito becomes infected when it bites a person with dengue virus in their blood. It can't be spread directly from one person to another person.

Symptoms:

- Sudden, high fever.
- Severe headaches.

- Pain behind the eyes.
- Severe joint and muscle pain.
- Fatigue.
- Nausea.
- Vomiting.
- Skin rash, which appears two to five days after the onset of fever.
- Mild bleeding (such a nose bleed, bleeding gums, or easy bruising).

Can lead to:

- dengue hemorrhagic fever,
- damage to lymph and blood vessels,
- bleeding from the nose and gums,
- enlargement of the liver, and failure of the circulatory system.
- The symptoms may progress to massive bleeding, shock, and death. This is called dengue shock syndrome (DSS).

Dengue virus are related to viruses that causes West Nile infection and Yellow fever.

Mostly occur in tropical areas of the world.

Every year 390 million dengue cases reported worldwide and recently capital reported more than 300 cases recently.

The worst effected areas are:

- The Indian subcontinent.
- Southeast Asia.
- Southern China.
- Taiwan.
- The Pacific Islands.
- The Caribbean (except Cuba and the Cayman Islands).
- Mexico.
- Africa.
- Central and South America (except Chile, Paraguay, and Argentina).

RIVER REGULATION ZONE

Unhindered construction on floodplains had resulted in severe floods in various parts of the country and damages the natural environment and violates the Environment protection Act 1986.

The construction also exerts massive stress on the river ecosystem due to discharge of huge amounts of waste into them.

The River Regulation Zone is a central policy for the protection of rivers and their floodplains on the lines of the Coastal Regulation Zone. The Environment Ministry had come out with a blueprint for river regulation zones where it proposes to prohibit or regulate developmental activities on river fronts and floodplains. The proposed river regulation zones will be under the ambit of the Environment Protection Act, 1986.

RRZ has proposed a prohibited activities zone that will extend from the riverbank to the outer edge of the floodplain and beyond — 500 metres from the highest flood level during the past 50 years.

Restricted activities zones: These zones will be floodplain areas which are subjected to less frequent flooding than areas under the former category and which lie farther from the river. The limits will extend

up to 1 km from the outer limits of the prohibited zone.

Regulated activities zone: The limits of such zones will extend up to 3 km from the outer limits of the restricted activities zone. Only certain activities such as traditional organic farming and recreational activities that do not require boat jetties will be permitted.

SaileshNayak Committee:The SaileshNayak Committee was formed with an objective to review the issues relating to Coastal regulation zone 2011. The CRZ Regulations amended in 2011 had dissatisfied a lot of States. The CRZ notification 2011 enshrined the concept of a Coastal Zone Management Plan (CZMP). It was to be prepared with the fullest involvement and participation of local communities. The amendment had mandated all states to submit coastal development plans for Centre's approval which were pending since 1991, the date of CRZ notification.

Its other objectives are:

- Protection of livelihoods of traditional fisher folk communities
- Preservation of coastal ecology
- Promotion of economic activity that are necessarily located in coastal regions

Importance of the CRZ:

- India has a long coastline of 7516 km, ranging from Gujarat to West Bengal, and two island archipelagos (Andaman Island and Lakshadweep).
- Our coastal ecosystems provide protection from natural disasters such as floods and tsunamis to the 250 million people who live in our coastal areas.
- Coastal waters provide a source of primary livelihood to 7 million households.
- Our marine ecosystems are a treasure trove of biodiversity, which we are only beginning to discover and catalogue.

Thus, our coastline is both a precious natural resource and an important economic asset, and we need a robust progressive framework to regulate our coast.

GST

GST is a value added tax, levied at all points in the supply chain with credit allowed for any tax paid on inputs acquired for use in making the supply. It would apply to both goods and services in a comprehensive manner with exemptions restricted to a minimum.

SALIENT FEATURES:

- The power to make laws in respect of supplies in the course of inter-State trade or commerce will be vested only in the Union government. States will have the right to levy GST on intra-State transactions including on services.
- Centre will levy IGST on inter-State supply of goods and services. Import of goods will be subject to basic customs duty and IGST.
- GST defined as *any tax on supply of goods and services other than on alcohol for human consumption.*
- Central taxes like, Central Excise duty, Additional Excise duty, Service tax, Additional Custom duty and Special Additional duty and State level taxes like, VAT or sales tax, Central Sales tax, Entertainment tax, Entry tax, Purchase tax, Luxury tax and Octroi will subsume in GST.

- Petroleum and petroleum products i.e. crude, high speed diesel, motor spirit, aviation turbine fuel and natural gas shall be subject to the GST on a date to be notified by the GST Council.
- Provision for removing imposition of entry tax / Octroi across India.
- Entertainment tax, imposed by States on movie, theatre, etc will be subsumed in GST, but taxes on entertainment at panchayat, municipality or district level to continue.

GST may be levied on the sale of newspapers and advertisements and this would give the government's access to substantial incremental revenues.

- Stamp duties, typically imposed on legal agreements by the state, will continue to be levied by the States.

Administration of GST will be the responsibility of the GST Council, which will be the apex policy making body for GST. Members of GST Council comprised of the Central and State ministers in charge of the finance portfolio.

Benefits of GST

GST has been envisaged as a more efficient tax system, neutral in its application and distributionally attractive. The advantages of GST are:

- Wider tax base, necessary for lowering the tax rates and eliminating classification disputes.
- Elimination of multiplicity of taxes and their cascading effects.
- Rationalization of tax structure and simplification of compliance procedures.
- Harmonization of center and State tax administrations, which would reduce duplication and compliance costs.
- Automation of compliance procedures to reduce errors and increase efficiency.

Destination principle

The GST structure would follow the destination principle. Accordingly, imports would be subject to GST, while exports would be zero-rated. In the case of inter-State transactions within India, the State tax would apply in the State of destination as opposed to that of origin.

Taxes to be subsumed

GST would replace most indirect taxes currently in place such as:

CENTRAL TAX

- Central Excise Duty [including additional excise duties, excise duty under the Medicinal and Toilet Preparations (Excise Duties) Act, 1955].
- Service tax.
- Additional Customs Duty (CVD).
- Special Additional Duty of Customs (SAD).
- Central Sales Tax (levied by the Centre and collected by the States).

- Central surcharges and cesses(relating to supply of goods and services).

STATE TAX

- Value Added Tax.
- Octroi and Entry Tax.
- Purchase Tax.
- Luxury Tax.
- Taxes on lottery, betting & gambling.
- State cesses and surcharges.
- Entertainment tax (other than the tax levied by the local bodies).
- Central Sales Tax (levied by the Centre and collected by the States).

OLYMPICS 2016

- 31st summer olympic games held in Rio (Brazil) came to end after 16 days of competition.
- The theme of the 31st edition of summer Olympic games was “world peace and environment”.
- 205 countries participated.
- US tops the medal tally with 46 gold , 37 silver and 38 bronze.
- Great Britain finished on second spot with 27 gold, 23 silver and 17 bronze.
- China on the 3rd position with 26 gold , 18 silver and 26 bronze.
- India finished at joint 67th position with 2 medals.
 - Bronze medal by Sakshi Malik in 58 kg weight class wrestling.
 - Silver medal by PV Sindhu in Badminton.
- Next 2020 olympics will be in Tokyo, Japan.

Olympics

- The modern **Olympic Games** or **Olympics** are leading international sporting events featuring summer and winter sports competitions in which thousands of athletes from around the world participate in a variety of competitions.
- The Olympic Games are held every four years, with the Summer and Winter Games alternating by occurring every four years but two years apart.
- inspired by the ancient Olympic Games, which were held in Olympia, Greece, from the 8th century BC to the 4th century AD.
- Baron Pierre de Coubertin founded the International Olympic Committee (IOC) in 1894. He is known as the **Father of Modern Olympics**.
- The IOC is the governing body of the Olympic Movement, with the Olympic Charter defining its structure and authority.
- SUMMER Olympics, Winter Olympic Games for ice and winter sports, the Paralympic Games for athletes with a disability, and the Youth Olympic Games for teenage athletes.

Some of the gold medal winners of Olympics 2016:

- **USAIN BOLT**
-The Jamaican sprinter, regarded as the fastest human ever timed, he is the first man to hold both the 100m and 200m world records since fully automatic time became

mandatory. He also holds the world record as a part of the 4 × 100 metres relay.

-Total number of gold medals: 9

-His achievements in sprinting have earned him the media nickname "Lightning Bolt".

- **MICHAEL PHELPS**

- Is an American swimmer and the most decorated Olympian of all time, with a total of 28 medals.

- With 23 gold, 3 silver and 2 bronze.

- With 39 world records (29 individual, 10 relay), Phelps has set more records than any other swimmer as recognized by FINA, surpassing Mark Spitz's previous record of 33 world records (26 individual, 7 relay).

- **MO FARAH**

- **Mohamed Muktar Jama "Mo" Farah** is a distance runner

- 5000 metres and 10,000 metres Double at London & Rio.

- Total medals: 4 gold medals

- **ASHTON EATON**

- **Ashton James Eaton** is an American decathlete and two-time Olympic champion, who holds the world record in both the decathlon and indoor heptathlon events, and is the second decathlete (after Roman Šebrle) to break the 9,000-point barrier, with 9,039 points.

- On August 29, 2015, he beat his own world record with a score of 9,045 points.

- Total Medals: 2 gold medals.

NATIONAL SPORTS AWARDS 2016

- **Rajiv Gandhi Khel Ratna Award:** P.V. Sindhu(Badminton), Sakshi Malik(Wrestling), DipaKarmakar(Gymnastics) and Jitu Rai(Shooting).

- **Dronacharya Award:** Bishweshwar Nandi(Gymnastics), Nagapuri Ramesh(Athletics), Sagar Mal Dhayal(Boxing), Raj Kumar Sharma(Cricket), S. Pradeep Kumar(Swimming) and Mahabir Singh(wrestling).

- 15 sportspersons have also received Arjuna Award and Dhyanchand award has been given to 3 sportspersons.

Background:

Rajiv Gandhi Khel Ratna: The scheme was launched in the year 1991-92 with the objective of honouring sports persons to enhance their general status and to give them greater dignity and place of honour in society. Under this scheme, an amount of Rs. 5 lakhs is given as award for the most spectacular and outstanding performance in the field of sports by an individual sportsperson or a team.

DRONACHARYA AWARDS: The Dronacharya Award, instituted in 1985, honours eminent Coaches who have successfully trained sportspersons or teams and enabled them to achieve outstanding results in international competitions.

ARJUNA AWARDS: The Arjuna Awards were instituted in 1961. To be eligible for the Award, a sportsperson should have had not only good performance consistently for the previous three years at the international level with excellence for the year for which the Award is recommended, but also have shown qualities of leadership, sportsmanship and a sense of discipline.

Dhyan Chand Award is India's highest award for lifetime achievement in sports and games. The award is named after the legendary Indian hockey player Dhyan Chand.

MaulanaAbulKalamAzad Award: Punjab University, Patiala (bestowed upon overall top performing university in inter university tournamnets).

BANDHAN BANK

- Bandhan was set up in 2001 to address the dual objective of poverty alleviation and women empowerment. The microfinance activities are carried on by Bandhan Financial Services Pvt. Ltd. (BFSPL), incorporated under the Companies Act, 1956 and also registered as a Non Banking Financial Company (NBFC) with the Reserve Bank of India (RBI).
- It was incorporated on 23rd December 2014 as a wholly owned subsidiary of bandhan financial holding limited.
- Bandhan bank is the first bank to be set up in eastern part of india after indepenence .
- Headquater :kolakata
- Bandhan financial holdings is owned by bandhan financial services limited (BFSL), the largest micro finance organization in India.
- Its public shareholders include International Finance Corporation (IFC), SIDBI, Bandhan Employee Welfare Trust and a few individuals.
- It is founded in 2001, under the leadership of Mr. Chandra shekhar Ghosh.
- It is involved in giving loans to small entrepreneurs and around 6.7 million women borrowers who do not have access to formal banking services.

DIGITAL LOCKER AUTHORITY SOON TO PUSH PAPERLESS GOVERNANCE

The Centre is planning to appoint an authority to administer and manage its Digital Locker initiative, one of the key projects under Digital India programme, as it looks to push paperless governance.

Proposal:

Digital Locker Advisory Group has advised the government to appoint Controller of Certifying Authorities (CCA) to take up the role of the Authority for regulation purposes, while

Standardisation Testing and Quality Certification (STQC) may be made responsible for drafting and maintenance of specifications and audits.

Functions to be performed by the authority:

- The Digital Locker Authority will be responsible for granting licenses and to authorise a private entity to offer these services.
- It will prepare standards and guidelines, while also ensuring compliance by service providers.
- These guidelines include those for data retention and migration, audit and security and privacy.
- The authority will also need to notify the fee or service charges a subscriber will have to pay for availing Digital Locker services from authorized service providers. Currently, the services are offered for free.

About Digilocker:

It is dedicated personal storage space, linked to each resident's Aadhaar number. DigiLocker can be used to securely store e-documents as well as store Uniform Resource Identifier (URI) link of e-documents issued by various issuer departments. The e-Sign facility provided as part of DigiLocker system can be used to digitally sign e-documents.

- The initiative was launched by the Department of Electronics and Information Technology, under the Ministry of Communications and IT.
- Here, the users can store their documents such as insurance, medical reports, PAN card, passport, marriage certificate, school certificate and other documents in the digital format.
- With this, the government is trying to create an electronic version of documents, which can be easily verified and stored in printable format.
- At present, the digital locker gives 10MB of free space for individuals to store documents and links of government department or agency-issued e-documents. The government is also planning to subsequently increase the storage space to 1 GB.

Benefits:

- It will minimize the use of physical documents and will provide authenticity of the e-documents.
- It will provide secure access to Govt. issued documents.
- It will also reduce administrative overhead of Govt. departments and agencies and make it easy for the residents to receive services.

FOOD SAFETY

Aiming to create a culture of food safety in the country, regulator FSSAI announced a host of initiatives to promote safe food at homes, schools, offices, eateries and religious places.

Commemorating the 10th anniversary of enactment of Food Safety and Standards Act 2006, the FSSAI said it will launch ten new initiatives that seek to connect people of all age groups for ensuring safe food through an integrated approach.

Eyeing regulation of quality of tap water

- FSSAI regulates domestic and international private food companies.
 - It is now eyeing regulating water utilities controlled by the government.
- Food regulator FSSAI is examining possibility of holding municipal authorities, state water supply boards accountable for the quality of water they supply.

Central Consumer Protection Council

- Expressed concern over quality of drinking water supplied through the pipeline
 - Recommended mandatory standards for drinking water, irrespective of its source
 - According to it, FSSAI should formulate standards for water through the pipeline and should monitor quality.
 - CCPC is an apex body that advises the government on the consumer-related issues
- However, FSSAI is yet to take a call on how to bring water supplied by municipal authorities and other government authorities such as Delhi Jal Board under its purview.

Census 2011

- 32% of India's households have access to treated tap water (pipeline supply)
- 5% of India's households get untreated water.
- In urban areas about 62% households have access to treated tap water which is supplied mainly by municipal corporations and other government agencies.

FSS Act 2006

- A mechanism to revamp the FSS Act is already in process.
- A performance audit of FSSAI is being undertaken.
- A Parliamentary Standing Committee has been set up to give its views to the Centre.
- The legislation is expected to bring forth
 - Better co-ordination with States and various ministries.
 - Simplifying the process of setting up standards.
 - Setting up cleaning, sorting and grading mechanisms for raw products at mandis.

FSSAI Background

- FSSAI is established under FSS Act, 2006
- It is a statutory body for laying down science based standards for articles of food and regulating manufacturing, processing, distribution, sale and import of food so as to ensure safe and wholesome food for human consumption.
- Ministry of Health & Family Welfare, Government of India is the Administrative Ministry for the implementation of FSSAI.
- Chairperson and CEO of FSSAI is appointed by Government of India.
- The Chairperson is in the rank of Secretary to Government of India.

2nd MEETING OF BRICS: DISASTER MANAGEMENT

About- 2nd Meeting of BRICS (Brazil, Russia, India, and China & South Africa) Ministers for Disaster Management was held in Udaipur, Rajasthan on August 22-23, 2016.

Focus on-

- Flood Risk Management
- Forecasting of Extreme Weather Events in the context of Changing Climate.

Outcome:

- Recognizing the common challenge posed by natural and man-made disasters, BRICS countries have identified Disaster Management as an important area of collaboration.
- The **Ufa Declaration** signed by BRICS Nations at the 7th BRICS Summit on July 9, 2015 identified the need to promote cooperation in preventing and developing responses to emergency situations.
- Declaration also acknowledged the fruitful discussions on natural disasters within the context of BRICS cooperation in Science, Technology and Innovation.
- It also reiterated BRICS commitment to mitigate the negative impact of climate change. *All the five BRICS countries have signed the Paris Agreement on Climate Change.*
- They are also **parties to the adoption of the Sendai Framework for Disaster Risk Reduction (DRR)** in March, 2015 and the Sustainable Development Goals (SDGs) in September 2015. A number of SDGs have specific targets related to Disaster Risk Management (DRM).

BARC DEVELOPS PORTABLE KIT FOR DETECTION OF CHROMIUM-CONTAMINATION OF WATER

About Chromium-

- 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 as been reported in several parts of the country.
- Chromium in the environment primarily exists as Trivalent Chromium Cr (III) and Hexavalent Chromium Cr (VI). The later 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 litre.

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, transportation to the laboratory, storage and finally analysis. The method can be used for limited water samples with errors due to conversion of Cr (III) to Cr (VI) and vice versa during transport and storage.

- BARC has developed a simple, user friendly, quick and cost effective kit for onsite determination of 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.
- Procedure involves adding a specified amount of specific reagents to the water sample and identifying the developed color.
- Color develops within 5 minutes and the distinction can be made with naked eye.
- For ease of comparison a color chart is provided with the kit.
- Water samples can be immediately categorized as being safe or toxic for drinking from Chromium (VI) point of view.
- Kit provides several advantages including onsite 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.

MENTAL HEALTHCARE BILL

- The Mental Health Care Bill has been passed in Rajya Sabha in August 2016.
- It is sought to replace the Mental Health Act, 1987.
- It provides for protection and promotion of rights of persons with mental illness during the delivery of health care in institutions and in the community.

Facts

- There is no official estimate of India's population suffering from mental illness.
- In 2005, it was estimated that 6-7% of country's population is suffering from some form of mental illness.
- Out of them, 1-2% are having an acute condition of mental disorders such as schizophrenia and bipolar disorder.
- Nearly 5% of the population suffered from common mental disorders such as depression and anxiety.
- WHO: estimates that 1 in 4 persons will be affected by some form of mental illness once in their lifetime.
- World Mental Health Day- 10th October

NHRC Report

- Major findings

Incomplete or insufficient information from most states on their mental health services.

Inadequate estimations of states' mental health needs.

Poor documentation of registration for mental health services in states

Very low patient registrations.

Meaning of Mental Illness

- Bill defines mental illness as “a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life.”

It includes mental conditions associated with alcohol and drug abuse, **but does not include mental retardation**, as it is a result of incomplete mental development of the person.

FLOOD MANAGEMENT

India's vulnerability to severe flooding during the monsoon is spectacularly demonstrated year after year, with the season invariably ending in significant loss of life and property.

One research study for the period 1978-2006 based on official data reports that there were 2,443 flood events that led to the death of nearly 45,000 people and caused economic losses of \$16 billion.

An integrated approach to managing floods requires a sound understanding of the patterns that rivers such as the Ganga and its tributaries display during the monsoon

Governmental understanding of the problem generally relies not so much on advanced techniques such as mapping based on satellite imagery and Geographic Information Systems, but on ground-level surveys and anecdotal reporting.

FACTS:

- Bihar is facing a flood threat despite receiving 16% less than expected rainfall because excess rainfall (40%) in northern Madhya Pradesh leading to overflowing of Son river.
- Additional water from Indrapuri dam on Son river emanating from MP has increased water flow into Ganga. About 12 lakh cusecs was released from the dam, flooding Ganga.
- The tributaries of Chambal river- Parvati, Kalisindh and Parwan were overflowing due to heavy rains in MP leading to flooding Kota and Jhalawar.
- FARAKKA BARRAGE: Bihar government wants the barrage in West Bengal “to go” as it leads to flooding in the state every year. 100 gates of the barrage were opened easing pressure on overflowing Ganga.
- 400 estimated deaths during this rainy season in India.
- 5 lakh people displaced during the current flooding.

Approximately 60% of the flood damage in the country occurs from river floods, while 40% is due to heavy rainfall and cyclones. Damages by the Himalayan Rivers account for 60% of the total damage in the country. In the peninsular river basins, most of the damage is due to cyclones whereas in the Himalayan Rivers about 66% is due to floods and 34% by heavy rains. About 27% of the flood damage in the country is accounted for by Bihar, 33% by Uttar Pradesh and Uttarakhand and 15% by Punjab and Haryana.

Which are the Flood prone regions of India?

1. The basin of the Himalayan rivers covering a part of Punjab, Haryana, Himachal Pradesh, Delhi, Rajasthan, Uttar Pradesh, Bihar and West Bengal. The Kosi and the Damodar are the main rivers causing floods.
2. The North-Western river basin covering the states of Jammu and Kashmir, parts of Punjab, Haryana, Western Uttar Pradesh and Himachal Pradesh. The Jhelum, the Sutluj, the Beas, the Ravi and the Chenab are the rivers causing floods in this region.
3. The Central and Peninsular river basins covering Madhya Pradesh, Odisha, Andhra Pradesh and Maharashtra, contain the Narmada, the Tapi, the Chambal and the Mahanadi. Heavy floods occur in the Godavari, the Krishna, the Pennar and the Cauvery at long intervals and flood problem is generally serious.

GREAT WHITE SHARK

Great white sharks are found in Australia, the United States and Japan and South Africa.

The great white sharks on the South African coast are heading for extinction.

“That has massive implications for the ocean’s ecology. White sharks are top predators. They are much like lions. If you take top predators out of the environment, the rest of the environment will collapse.

The conservation group WWF has warned that the number of great whites is decreasing worldwide.

Pollution, poaching, baited hooks and shark nets are some of the main factors behind the decline in the number of great whites.

Listed as vulnerable animals by the Convention on International Trade in Endangered Species, should be listed as endangered species at the next **CITES** conference in South Africa in September.

Great white shark:

- Great whites are the largest predatory fish on Earth.
- They have slate-gray upper bodies to blend in with the rocky coastal sea floor, but get their name from their universally white underbellies
- Found in cool, coastal waters throughout the world, there is no reliable data on the great white's population.
- Their main prey items include sea lions, seals, small toothed whales, and even sea turtles, and carrion.

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora)

- is an international agreement between governments to ensure that international trade in specimens of wild animals and plants does not threaten their survival
- CITES has been among the conservation agreements with the largest membership, with now 182 Parties.
- Also known as Washington convention.
- The convention was opened for signature in 1973 and entered into force on 1 July 1975.
- Participation is voluntary.
- CITES is legally binding on the Parties, it does not take the place of national laws. Rather it provides a framework respected by each Party, which must adopt their own domestic legislation to implement CITES at the national level.

**ICAR REGISTERS 9 NEW GERMPLASM OF INDIGENOUS FARM ANIMALS
AS BREEDS**

Recognizing the need for an authentic national documentation system of valuable sovereign genetic resource with known characteristics, Indian Council of Agricultural Research (ICAR) initiated the mechanism for “Registration of Animal Germplasm” through National Bureau of Animal Genetic Resources (NBAGR).

This mechanism is the sole recognized process for registration of “Animal Genetic Resources” material at national level.

The Breed registration Committee in its meeting on 21st June, 2016 at New Delhi approved registration of nine new breeds of livestock and poultry. This includes one breed of cattle, two breeds each of goat and sheep, three breeds of pig, and one breed of chicken. After including these newly registered breeds, total number of indigenous breeds now in the country is 160 (which include 40 for cattle, 13 for buffalo, 26 for goat, 42 for sheep, 6 for horses & ponies, 9 for camel, 6 for pig, 1 for donkey and 17 for chicken).

Badri cattle: These are indigenous cattle available in hilly areas of Uttarakhand. Badri cattle are small in size having long legs and varied body colours – black, brown, red, white or grey. These are well adapted to the hilly terrain and climatic conditions and comparatively more resistant to diseases. Estimated population is approximately 16 lakhs.

Teressa Goat: It is an indigenous goat breed maintained by Nicobari tribal farmers of Nicobar group of islands. These goats are generally tall, sturdy, brownish or dark tan or black or white in colour with white and black patches. Adult body varies from 15 to 79kg. Estimated population is about 7,721.

KodiAdu Goat: KodiAdu goats are native to Thoothukudi&Ramanathapuram districts of Tamil Nadu. These are tall, long, lean and leggy animals with compact body. They are reared mainly for meat. Adult body varies from 15 to 59kg. Population of these goats is about 1,67,000.

Chevaadu sheep: Chevaadu sheep are found in Tirunelveli district of Tamil Nadu. Animals are small to medium in size. Two colour variant viz. light brown and dark brown or tan are present. Adult body varies from 18 to 39kg. Estimated population is about 1,58,200.

Kendrapada sheep: Breeding tract ofKendrapadasheep comprises of six coastal districts of Odisha viz. Kendrapada, Jagatsingpur, Cuttack, Puri, Jajpur and Bhadrak . These sheep are mostly brown in colour. Adult body varies from 24 to 30kg. Estimated population is about 1,23,000.

TenyiVo pig: These are indigenous pigs reared in Nagaland mainly for pork production. TenyiVo pigs have strong and long tapering snout, small erect ears and bright alert eyes. Adult body varies from 35 to 50kg. Estimated population is about 60,000-70,000

Nicobari pig:Nicobari pigs are indigenouspigs of Nicobar Islands and are reared by Nicoabri tribes since time immemorial. They are fast runner. Adult body varies from 26 to 61kg.Estimated population is about 35,000.

Doom pig: Doom pigs are distributed in Dhubri, Bongaigaon and Kokrajhar districts of Assam state. These are black in colour and have short concave snout. Adult body variesfrom 36 to 50kg. Estimated population is about 3,000.

Kaunayen chicken: Its breeding tract consists of Thoubal, Imphal West, Imphal East and Bishnupur districts in the valley region. Some birds are also available in hill region consisting of Chandel, Churachandpur, Senapati, Ukhrul, Tamenglong districts. Kaunayen birds have elongated body with long neck and long legs. And are used for cock fighting. Estimated population is approximately 60,000-80,000.

KHADI AND VILLAGE INDUSTRIES COMMISSION(KVIC)

The **Khadi and Village Industries Commission(KVIC)** is a statutory body formed by the Government of India, under the Act of Parliament, '**Khadi and Village Industries Commission Act of 1956**'. It is an apex organization under the Ministry of Micro, Small and Medium Enterprises, with regard to khadi and village industries within India, which seeks to – “plan, promote, facilitate, organise and assist in the establishment and development of khadi and village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.” In April 1957, it took over the work of former All India Khadi

and Village Industries Board. Its head office is based in Mumbai, with its six zonal offices in Delhi, Bhopal, Bangalore, Kolkata, Mumbai and Guwahati.

GOVERNMENT INTRODUCES BILL TO AMEND CITIZENSHIP ACT

To provide succour to refugees from neighbouring countries, the government introduced a bill in Parliament to amend the Citizenship Act so that Hindus, Sikhs and other minorities of these nations could be granted citizenship even if they do not provide required documents.

Many persons of Indian origin of Pakistan, Bangladesh and Afghanistan have applied for citizenship but unable to provide proof of their Indian origin. They are forced to apply for citizenship by naturalisation under the Citizenship Act which required 12 years of residency as qualifications for naturalisation in terms of the law.

THE CITIZENSHIP (AMENDMENT) BILL, 2015

1. The Citizenship Act, 1955 regulates the acquisition and determination of citizenship after commencement of the Constitution. It provides for citizenship by birth, descent, registration, naturalisation and by incorporation of territory. In addition, it provides for renunciation and termination of citizenship under certain circumstances. It also contains provisions regarding registration of Overseas Citizens of India and their rights.

2. Citizenship by registration and naturalisation: The Act allows a person to apply for citizenship by registration or naturalisation if they fulfil certain qualifications.

3. The Bill provides certain additional grounds for registering for an Overseas Citizen of India card. These are:

(i) a minor child whose parent(s) are Indian citizens,

(ii) spouse of foreign origin of an Indian citizen or spouse of foreign origin of an Overseas Citizen of India cardholder subject to certain conditions,

(iii) great-grandchild of a person who is a citizen of another country, but who meets one of several conditions (for example, the great-grandparent must be a citizen of India at the time of commencement of the Constitution or any time afterwards).

4. The Act also provides that any person who is/has been a citizen of Pakistan or Bangladesh or any other country which is notified by the central government will be ineligible to apply for Overseas Citizenship of India.

5. The Bill also introduces a new provision which allows the central government to register a person as an Overseas Citizen of India cardholder even if s/he does not satisfy any of the listed qualifications. This is permissible if special circumstances exist.

6. Merger of Overseas Citizen of India and Persons of Indian Origin schemes: Currently, the central government provides for two schemes for Indian origin persons, and their families, the Persons of Indian Origin card and the Overseas Citizen of India card. Persons of Indian Origin enjoy fewer benefits than Overseas Citizens of India.

7. Renunciation and cancellation of overseas citizenship: The Act provides that where a person renounces their overseas citizenship, their minor child shall also cease to be an Overseas Citizen of India. The Bill extends this provision to cover spouses of Overseas Citizen of India cardholders. The Bill also allows the central government to cancel the Overseas Citizenship of India card where it is obtained by the spouse of an Indian citizen or Overseas Citizen of India cardholder, if: (i) the marriage is dissolved by a court, or (ii) the spouse enters into another marriage even while the first marriage has not been dissolved.

'SILK ROAD' TRAIN TO REACH AFGHANISTAN ON SEPT. 9

The first cargo train from China is set to reach Afghanistan on September 9, illustrating Beijing's efforts to consolidate ties with Kabul as part of the One Belt One Road (OBOR) initiative along the ancient Silk Road.

The train left China's eastern city of Nantong to undertake a 15-day journey to Hairatan, a town on Afghanistan's border with Uzbekistan.

It will enter Afghanistan after crossing the Friendship Bridge on the Amu Darya River that marks the boundary between Uzbekistan and Afghanistan.

China's interest: The decision to run a cargo train follows concerted efforts by China to play a leading role in bringing political stability in Afghanistan. It will also help Beijing to:

- Secure the OBOR route.
- To safeguard the China Pakistan Economic Corridor (CPEC).
- To plug the support enjoyed along the border region by the separatists operating in the Xinjiang Province.

ONE BELT ONE ROAD

- OBOR is the land based economic corridor to run from Xian in Shaanxi province, China and navigating through Central Asia and Europe, before terminating at Venice in Italy.
- The 21st century Maritime Silk Road – a sea based route originating from Quanzhou in Fujian province China, then passing through the Strait of Malacca on order to reach Nairobi(Kenya), before merging with land based route in Venice.
- OBOR covers about 40-60 countries consisting of 30% of world GDP.
- OBOR is likely to be completed in time for the 100th anniversary of the establishment of the People's Republic of China.
- Huge investments will be made in sectors related to construction, high speed railways, telecommunications, energy pipelines, development of ports and establishment of trade logistics.

BRICS JAIPUR DECLARATION

BRICS (Brazil, Russia, India, China and South Africa) women parliamentarians' forum on 21st August 2016 passed unanimously the Jaipur Declaration. The declaration was adopted by them on the concluding day of the BRICS women parliamentarians' forum meet held in Jaipur, Rajasthan. The declaration has emphasized the need to inform 'communicate and educate citizens about development Schemes.

Important points of Discussion

- i. The Declaration mentions the need to address climate change and protection of ecological system and forest as well as food security, parliamentary approval of SGD (Sustainable Development Goals) related legislation and adequate budgetary resources.
- ii. It calls upon international financial institutions to extend support to developing and least developed countries and help them gain easier access to new and affordable technologies as envisaged under the UN Framework Convention on climate change and the Paris Agreement.
- iii. It also emphasizes on plans for incorporating gender concerns and greater involvement of women Parliamentarians in integrating citizens in the development process.
- iv. Institutionalization of BRICS Women Parliamentarians Forum.

CHINA HAS LAUNCHED WORLD'S FIRST QUANTUM SATELLITE.

- Quantum Satellite named 'MICIUS' left earth on August 16 from JIUQUAN Satellite launch Centre in the Gobi Desert.
- Developed by China and Austria. It's the first of an intended global system of 20 such satellites in China's Ques ("Quantum Experiments at Space Scale") Program.

Objective of the MICIUS Project:

- Is to create uncrackable encryption Keys.
 - An encryption key is typically a string of numbers known only to sender and recipient that can decode an encrypted message.
 - Projects are pinned on two Quantum Concept (a) Superposition (b) Quantum entanglement
- (a) Superposition refers to the idea that quantum Particles can be in Multiple States at the same time. Quantum particles can behave like waves, meaning they exist in all sorts of shape. Its only when a quantum particle is observed that it stabilities into one single state. This would be handy for an encryption key.

(b) In Quantum entanglement two Particles form a single superposition together. This means that their states are interlocked as if they are a single entity. Changing the state of one simultaneously changes the state of the other. This exchange of information is called ‘Quantum teleportation’.

(c) MICIUS will create an entangled particle encryption key it will transmit along with an encrypted message to ground station in China or Austria.

With the importance of unbreakable encryption MICIUS will give china a one up on cyber-Security.

The US tried to launch its own Quantum satellite in 2014, but the rocket ferrying it to the ISS exploded on route.

INTERNATIONAL SOLAR ALLIANCE

ISA was jointly announced by India and France at the UN Paris Climate change conference. India has committed financial support worth Rs.400 Crore, the ISA headquarters made in Gurugram and joint declarations were signed with the UN Development Programme and the World Bank.

ISA being designed as a platform to bring together countries with rich solar potential (along with solar innovators, developers and financiers) to aggregate demand for solar across member countries, creating a global buyers market for solar energy, and thereby reducing prices, facilitating the deployment of existing solar technologies at scale and promoting collaborative solar required and capacity.

Challenges for ISA

- (a) Financing is still too costly for developers.
- (b) Solar related plans and policies are often incoherent and increase risks for developers and inventions.
- (c) Insufficient R&D investment in Solar.
- (d) 121 potential member countries get caught up in a battle over legal form, membership rights and giving precedence to procedure over pragmatism.

Suggestions and measures taken / should be taken.

- ISA envisions that collective measures can facilitate the flow of our 1 trillion in solar projects by aggregating demand within countries, standardized asset – structuring across countries and establishing an ecosystem of financial instruments to mitigate some of the investment risks.
- ISA also has launched major program on scaling solar applications in agriculture and has financing off grid energy access.

- ISA also has plans to address related market limiting factors by launching standardized skill training program and reducing information asymmetries through a 24 x 7 knowledge hub.

NAMAMI GANGE

It is the implementation wing of National Ganga River Basin Authority (NGRBA) and a registered society originally formed by Ministry of Environment, forest and climate Change in 2011 under Societies Registration Act 1860.

Aims and Objectives of National Mission for Clean Ganga

- i. Is to accomplish the mandate of National Ganga River Basin Authority (NGRBA).
- ii. To ensure effective abatement of pollution and rejuvenation of river Ganga by adopting river basin approach.
- iii. To maintain minimum ecological flows in the river Ganga with the aim of ensuring water quality and environmentally sustainable development.

Key Functions

- i. Implement the work program of National Ganga River Basin Authority (NGRBA).
- ii. Implement World Bank supported National Ganga River Basin Project.
- iii. Coordinate and oversee the implantation of projects sanctioned by Govt. of India under NGRBA.
- iv. Make rules and regulations for the conduct of the affairs of the NMCG.

About National Ganga River Basin Authority (NGRBA)

- NGRBA constituted in February 2009 under Environment Protection Act, 1986.
- NGRBA is a planning, financing, monitoring and coordinating body of the Centre and States.
- The objective of the NGRBA is to ensure effective abatement of pollution and conservation of the river Ganga.
- The Authority has both regulatory and developmental functions.

UNIVERSAL HEALTH COVERAGE PROGRAMME

This programme is ensuring equitable access for all Indian citizens, resident in any part of the country, regardless of income level, social status, gender, caste or religion, to affordable, accountable, appropriate health services of assured quality as well as public health services addressing the wider determinants, of health delivered to individuals and populations, with the government being the guarantor and enable, although not necessarily the only provider of health and related services.

AYUSH

- The Department of Ayurveda, Yoga and naturopathy, Unani, Siddha and Homeopathy abbreviated as AYUSH.

It is a government body, purposed with developing, education and research in ayurveda, yoga, naturopathy, Unani Siddha and homoeopathy, sowa-rigpa (Traditional Tibetan Medicine) and other indigenous Medicine systems.

- The department was created in March 1995 as the Department of India System of Medicine and Homeopathy (ISM&H).
- Earlier it was operated under the Ministry of Health & Family Welfare.
- AYUSH received its current name in 2003.

POSCO-E-BUTTON FOR CHILDREN TO FILE COMPLAINTS OF SEXUAL ABUSE HAS BEEN LAUNCHED.

- Union Ministry of women and child development has launched an online complaint box named POSCO e-box for reporting child Sexual abuse in New Delhi.
- The Protection of children from Sexual affairs (POSCO), e-Box is a portal which ash dedicated system for easy and direct reporting of sexual offence against children and appropriate action against the offender under the POSCO Act 2012.
- The Portal is merged prominently in the home page of National Commission for protection of child Rights (NCPCR) Portal.

About POSCO Act 2012

- The Protection of Children from Sexual offences Act 2012, defines a child as any person below the age of 18 years.
- Provide protection to all children from the offences of sexual assault, sexual harassment and Pornography.
- The Act provides for stringent Punishments which have been graded as Per gravity of the offence.

- Act also provides punishment for abatement of the offence, as same as commission of the offence, as same as commission of the offence.
- This would also cover trafficking of children for sexual purposes.

SCIENTISTS DETECT RARE DEEP-EARTH TREMOR S WAVE MICROSEISM

- Japanese Scientist found a tremor known as an S wave microseism, using seismic equipment on land and on the sea floor that usually detects the Earth's crust crumbling during earthquakes.
- This finding will help the experts to learn more about the Earth's inner structure and improve detection of earthquakes and oceanic storms.
- The elusive S waves or secondary waves are slower and move only through rock, not liquid.
- Microseism S waves are so faint that they occur in the 0.05 to 0.5 Hz frequency range.

DARK MILKY WAY SIZED GALAXY DISCOVERED

- Astronomers have found a galaxy as big as the Milky way that consists almost entirely of dark matter accounts 99.99% of the stuff in this galaxy can't be seen.
- Scientists consider that dark matter exist because they can see the effects of its gravity on other twinges in space.
- The Galaxy named as Dragonfly 44, is located in the nearby coma constellation which was first detected in 2015, through the Dragonfly telephoto Army in New Mexico.
- This time the Scientists spotted dragonfly 44 using WM Keck observatory and the Gemini North Telescope in Hawaii.

MONITORING OF NON GOVERNMENT ORGANISATION

The Home Ministry wants the Finance Ministry to surrender its powers to monitor NGOs under the Foreign Exchange Management Act (FEMA).

AIM To bring all NGOs which receives foreign funding or contribution under one umbrella for better monitoring and regulation.

Current Status

There are nearly 100 international NGOs and associations which receive foreign funds though their liaison offices and disburse them to NGO across India.

- Home Ministry monitors foreign funds donated to NGOs and Organisations through the Foreign contribution Regulation Act (FCRA), 2010.
- There are certain NGOs which are registered under FEMA and continue to disburse foreign funds to various associations. As FEMA is regulated by Finance Ministry.

Major Issue

- Many NGOs and foreign donors do not want to register under FERA due to its stringent provisions.

As the number of NGOs registered under FCRA is 33,000 and 10,000 NGOs was Cancelled for not following norms.

- Due to NGOs registering under FEMA, there is ineffective monitoring of funds.
- According to the report of the Home Ministry during 2014-15, foreign contribution to NGOs in India came down by more than 30%.

Conclusion

The FCRA was brought into force to regulate the flow of foreign funds to voluntary Organizations with the objective of preventing any possible diversion of such funds to anti-national activities.

Since there is a separate law – the FCRA – to deal with such transactions, it will better if they are brought under a common head.

FUNGI RECYCLE RECHARGEABLE LITHIUM-ION BATTERIES

Environment friendly method to recycle used rechargeable lithium ion batteries, with the help of fungi. Old batteries often wind up in land fills or incinerations, potentially harming the environment and valuable materials remain locked inside. The demand for lithium is rising rapidly and it is not sustainable to keep mining it.

Global problem of the electronic waste products arises the question of recycling. Such as :

- Many head to a landfill to slowly break down in the environment or go to incineration to be burned, generating potentially toxic air emissions.
- While other methods – separate lithium, cobalt and other metals, they require high temperatures and harsh chemicals.
- Eco friendly method developed by using 3 strains of fungi – Aspergillus Niger, PenicilliumSimplicissimum and PenicilliumChrysogenum.
- These 3 strains are selected because they have been observed to be effective at extracting metals from other types of waste products.

How it will work?

Firstly, team will dismantle the batteries and pulverize the cathode. Then they expose the remaining pulp to the fungus.

Fungi naturally generate organic acids and the acid work to leach out the metals. Through this interaction of the fungus, acid and pulverized cathode, valuable cobalt and lithium will be extracted.

ISRO's SCRAMJET ENGINE PROPULSION

- The first experimental mission of ISRO's Scramjet Engine towards the realization of an Air Breathing Propulsion system was successfully conducted.
- India is the fourth country to demonstrate the flight of Scramjet Engine after US, RUSSIA and JAPAN.
- Scramjet engine uses hydrogen as fuel and the oxygen from the atmospheric air as the oxidizer.
- Advanced technology vehicle scramjet engine weighed 3277kg at lift off.
- In this mission, ISRO successfully demonstrated its capabilities in critical technologies like ignition of air breathing engines at supersonic speed, air intake mechanism and fuel injection system.

ABOUT AIR BREATHING PROPULSION

- Air breathing propulsion system uses atmospheric oxygen, which is available up to about 50km from the earth's surface to burn the fuel stored on –board thereby making the system much lighter, more efficient and cost effective.
- Air breathing propulsion is a solution for a powered long return cruise flight necessary for reusable launch vehicle.

Launch vehicle use combustion of propellants, consisting of oxidizer and fuel for driving the energy.