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1. POLITY AND GOVERNANCE

1.1. CENTRE-STATE RELATIONS: NEW FRAMEWORK FOR GRANTS

Budget 2016–17 has made three important Provisions relating to central transfers to states.

Rationalization of Centrally Sponsored Schemes (CSS)

- **Background**
  - Government of India through NITI Aayog constituted a subgroup of chief ministers for rationalizing and restructuring the CSS.
  - It recommended that focus of the CSS should be on the schemes that comprise the National Development Agenda.
  - It further recommended that the schemes be divided into “Core” and “Optional” schemes and amongst the Core Schemes those for social protection and inclusion should be called “Core of the Core”.
  - The subgroup further recommended that the investment levels in the Core Schemes should be maintained so as to ensure that the optimum size of the programme does not shrink.

- **New Framework for Grants in Budget 2016-17**
  - The government on the recommendation of the subgroup of chief ministers restructured the grants.
  - As per the decision of Government, the existing funding pattern of schemes defined as 'core of the core' have been retained.
  - The funding pattern of 'core' schemes, which also form part of the National Development agenda, will be shared 60:40 between the Centre and the States (90:10 for the 8 North Eastern States and 3 Himalayan states).
  - In case a scheme/sub-scheme in the above classification that has a Central Funding pattern of less than 60:40, the existing funding pattern will continue.
  - The other optional schemes will be optional for the State Governments and their fund sharing pattern will be 50:50 between the Centre and the States (80:20 for the 8 North Eastern States and 3 Himalayan States). Examples of such schemes are Border Area Development Programme, National River Conservation Plan, Shyama Prasad Mukherjee RURBAN Mission etc.
  - In Union Budget 2016–17 the total number of CSS has been brought down to 28.

**Core of the Core (6 Schemes)**
- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA)
- National Social Assistance Programme
- Umbrella Scheme for the Development of Scheduled Castes
- Umbrella Programme for Development of Scheduled Tribes (Tribal Education and Van Bandhu Kalyan Yojana)
- Umbrella Programme for Development of Backward Classes and other vulnerable groups
- Umbrella Programme for Development of Minorities (a) Multi Sectoral Development Programme for Minorities. (b) Education Scheme for Madaras and Minorities

**Core (18 Schemes)**

For example
- Green Revolution (a) Krishi Unnati Yojana (b) Rashtriya Krishi Vikas Yojana
- White Revolution - Rashtriya Pashudhan Vikas Yojana (Livestock Mission, Veterinary Services and Dairy Development)
- Pradhan Mantri Krishi Sinchai Yojana
- Swachh Bharat Abhiyan
- National Health Mission (NHM)
- Integrated Child Development Services (Umbrella ICDS)
- Member of Parliament Local Area Development Scheme. etc

Devolution of taxes post the Fourteenth Finance Commission (FFC) award

- Tax devolution has witnessed a major jump in the total resource transfers to states due to the increase in tax devolution to 42% of the divisible pool.
- Aggregate transfer to states in 2016–17 is ₹9, 18,093 crore as compared to ₹8, 18,034 crore in 2015–16.
Effective outcome-based monitoring of implementation of schemes and doing away with the plan and non-plan expenditure distinction in the budget after the completion of the Twelfth Five Year Plan

- An exercise to rationalize Plan and Non Plan schemes of all Ministries and Departments had been undertaken.
- The existing programmes and schemes have been re-organized into outcome based Umbrella programmes and schemes to avoid thin spread of resources.

1.2. RIGHTS OF TRANSGENDER PERSONS BILL, 2015

Why in news?
- The ministry of social justice recently sent the draft bill on the ‘Rights of Transgender Persons Bill, 2015’ to the law ministry for finalization before it is sent to the cabinet for approval.

Background
- The legislation is modelled on the private members’ bill moved by Rajya Sabha MP Tiruchi Siva and passed by the Upper House on April 24, 2015.
- The government then assured the House that it would bring its own law in Lok Sabha after “correcting infirmities” in Siva’s Bill.

Salient Provisions
- It provide for the formulation and implementation of a comprehensive national policy for ensuring overall development of the Transgender Persons and for their welfare to be undertaken by the State.
- The Bill provides recognition of transgender people before law and gives them rights and entitlements including reservation in education and government jobs under the OBC quota(except SC/ST).
- TRANSGENDER IDENTITY:
  - Transgender should be declared as the third gender, and a Transgender Person should have the option to identify as ‘man’, ‘woman’ or ‘transgender’ as well as have the right to choose any of the options independent of surgery/hormones.
  - Only the nomenclature ‘transgender’ should be used and nomenclatures like ‘other’ or ‘others’ should not be used.
  - Certificate to be provided by a state level authority that a person is a transgender person.
- RIGHTS AND ENTITLEMENTS:
  - Government shall take all necessary steps to ensure that transgender persons enjoy the right and entitlements as given in Constitution of India on an equal basis with others.
  - No child who is a transgender shall be separated from his or her parents on grounds of being a transgender except on an order of competent Court, if required in the best interest of the child.
  - Government shall take all appropriate measures to prevent abuse, violence and exploitation against Transgender Persons.
  - The bill calls for necessary amendments in IPC to cover the cases of sexual assault on Transgender Persons.
- Non discrimination
  - The Bill also states that Government is duty bound to take appropriate steps in protecting rights of Transgenders and to ensure that they are not being discriminated against.
No establishment shall discriminate against any Transgender Person in any matter relating to employment including but not limited to recruitment, promotion and other related issues.

- The Bill also has provisions regarding social security, health, rehabilitation & recreation, Education, skill development & employment of Transgenders.

Need

- The community which has around 6 lakhs population as per 2011 census had been neglected since a long time, will finally get its dues as citizens of our country.
- The Bill attempts to do cover all types of discrimination faced by the community and clearly lists them to avoid ambiguities. Provision for reservation and support through scholarships etc will help in their empowerment in true sense.
- Will create awareness among the people and sensitize them to be compassionate for the cause of the community and look at them with respect.

1.3. INDUSTRIES DEVELOPMENT AND REGULATION AMENDMENT BILL 2015

Why in News?

- During Budget session, The Rajya Sabha has passed the Industries (Development and Regulation) Amendment Bill, 2015. Lok Sabha has already passed the bill in December 2015.

Important Provisions

- The bill seeks to amend the Industries (Development and Regulation) Act, 1951.
- The Industries (Development and Regulation) Act, 1951 provides for development and regulation of certain industries including metallurgical, telecommunications, transportation, fermentation (which includes production of alcohol) among others.
- The 1st schedule of the Act includes all industries that are regulated under the Act.
- The Bill amends the schedule to exclude production of alcohol for potable purposes from the ambit of the Act.
- It proposes to bring industries engaged in the manufacture of potable alcohol under the exclusive control of States in all respects.
- However, the Union Government will continue to be responsible for formulating policy and regulating foreign collaboration for all products of fermentation industries, including industrial and potable alcohol.

1.4. REGIONAL CENTRE FOR BIOTECHNOLOGY BILL, 2016

Why in News?

- The Loksabha passed The Regional Centre for Biotechnology Bill, 2016.
- The Bill seeks to establish a Regional Centre for Biotechnology, an institution of education, training and research, under the auspices of United Nations Educational, Scientific and Cultural Organization (UNESCO) in the National Capital Region.

Provisions

- The Bill seeks to provide legislative backing to the Regional Centre.
- It also confers upon it the status of an institute of national importance.
- The Regional Centre for Biotechnology will take up research and innovation and impart education and training in the new
areas of Biotechnology at the interface of multiple disciplines of science creating a hub of technology expertise.

Institute of National Importance
- An Institute of National Importance, in India is defined as one which serves as a pivotal player in developing highly skilled personnel within the specified region of the country/state.
- Only a chosen few institutes make it to this coveted list and are usually supported by the Government of India.
- In India, all of the IITs, NITs, AIIMS, NIPERs, ISI and some other institutes as Institutes of National Importance.

1.5. INDIAN JUDICIAL SYSTEM

Why in News?
- During the Annual Chief Ministers and Chief Justices Conference, problems and solutions for Indian Judicial System were discussed.

Issues in Judiciary
- Appointment:
  - The country has a judicial strength of a mere 18,000, as against the requirement of about 50,000 judges.
  - At present, 434 vacancies of High Court judges remained unfilled.
  - The subordinate judiciary has 4580 vacancies across the country.
- Administrative Inefficiency:
  - Inadequacy of staff attached to High Courts.
  - There are 60,260 cases pending before the Supreme Court.
  - All High Courts in India, as a whole, have an incredible 38.68 lakhs of cases awaiting disposal.
  - The backlog of all courts including the lower courts is estimated to be around 3 crores.
- Financial Autonomy:
  - Planning and budgetary exercises being undertaken without consulting the judiciary.
- Transparency: Despite the decision of the Central Information Commission (CIC), Judiciary has kept itself out of preview of RTI.

Steps Taken
- The enactment of Commercial Courts Act, 2015 for dedicated commercial courts at district and High Court level, and also laying down the time limits for disposal of commercial disputes/appeals.
- Amendments to Arbitration and Conciliation Act, 1996 and the Negotiable Instruments Act, 1881 to ensure quick and cost effective settlement of commercial disputes to arbitration.
- To improve the quality of Legal Education in India, setting up of Lawyers ‘Academy in Kochi is a step in right direction.

Reforms needed
- Justice is an integral part of our Constitution. To achieve this objective, we need to continuously improve our legal and judicial framework so that timely and cost effective justice is made available at the door steps to our people.
- Setting up of Fast Track Courts, Additional Courts and Family Courts.
- Increasing the ICT capabilities of the courts.
- Setting up of Alternative dispute resolution centres such as Lok Adalats should be encouraged.
- Uniform methodology to collect judicial data and streamlining of court processes.
- To boost the confidence of the people in judiciary, judiciary should reveal information like the number of pending or reserved judgments by bringing itself under ambit of RTI.
- **Simplification of Laws**: Government should work to remove old and dysfunctional elements in legislation by amending Indian penal code, civil procedures code and Indian evidence Act.
- Rules should be changed to provide a uniform retirement age for judges of the Supreme Court and the High Courts.
- To prevent corruption, cool off period should be introduced for judges before taking up any new government assignment.
- As suggested by the Law Commission, in its 245th report, a ‘rate of disposal’ method should be adopted in which the number of judges required at each level to dispose of a particular number of cases could be computed based on analysis.

### 1.6. CRIMINAL JUSTICE SYSTEM

**Challenges of Current Criminal Justice System in India**
- Because of delay and uncertainties involved, it does not deter criminals.
- Punishments for those convicted are ineffective.
- Wide discretion to police and prosecution makes system vulnerable to corruption and manipulation.
- Ignores the real victim, leading them to resort to extralegal method seeking justice.
- Heavy economic burden on the state without the returns.
- System is overburdened with nearly 30 million criminal cases pending and with 10 million being added every year.

**Strategy for Reform**
- The Committee on the Reforms of Criminal Justice System in India (2003) suggests a three-fold strategy.
- **First**, procedural and substantive law needs a change based on changes in society and economy with the guiding principles being decriminalization and diversion.
  - A suggestion under this could be dividing the penal code into four different codes: Social Offences Code, Correctional Offences Code, Economic Offences Code and Indian Penal Code.
  - The Social Code includes matters of civil nature that can be settled without police intervention and prison terms through administrative processes.
  - The Correctional Code includes offence punishable up to three years imprisonment where plea-bargaining can be liberally invoked.
  - Economic Code includes property offences, which affect financial stability of the country dealt with through combination of criminal and administrative strategies.
  - Indian Penal Code will include only major crimes warranting ten years imprisonment or more or death.
- **Second** is the institutional reform of police processes. This includes investigation, professionalization, rationalization of court systems through technology and limiting appeal procedures to the minimum.
- **Third** is giving a bigger and more responsible role to the victim in the whole procedure.
  - It involves restoring the confidence of the victim in the system.
  - This would include conferring rights on the victim like, participating in proceedings, right to engage an advocate, track progress of case, to assist court in pursuit of truth etc.
  - Right to seek compensation for injuries suffered irrespective of the fate of proceedings.
  - Following a restorative means which enjoys community support, victim satisfaction and offender acknowledgement of obligations.

### 1.7. ELECTORAL REFORMS

**Why in News?**
- Recently, Prime Minister has suggested that elections to the national and state legislatures, panchayats and urban local bodies should be held simultaneously.

**Need**
- **Large amount of money** is spent on various elections every year.
Whole administrative machinery gets engaged in election work which affects the productivity of other government services.

Frequent elections bring to a standstill normal functioning of the government cannot announce any new schemes, make any new appointments, transfers or postings without EC approval during this period.

However, frequent elections enhance accountability because it forces the politicians to meet the masses.

Concerns

- Local and national issues will get mix up and will distort priorities. In voters’ minds national issues might overtake state and local issues or vice versa.
- Passing a no confidence motion to conduct the election before expiry of the term will be unconstitutional (Article 83(2) - It is state’s prerogative to decide when to call for elections).
- It is also against the federal feature of the constitution.
- Not easy to implement: Many times a Government is dissolved prematurely, so in long run having a mismatch in elections is inevitable. For e.g. Consider one old scenario when the Lok Sabha gets dissolved in just 13 days, in 1998.

Way Forward

- Simultaneous elections to Panchayats, assembly and Lok Sabha are desirable however they are not feasible. To make the election process more transparent, cost effective, peaceful and quick we should consider some easily implementable solutions such as:
  - To cut the role of money power in elections, putting a cap on political party expenditure and state-funding of political parties.
  - Also ban on all private, especially corporate funds should be considered.
  - Reduce the duration of the election process by half by conducting the elections in one day.

1.8. MINISTRY OF POWER: NEW SCHEMES

Why in News?

In order to make country more energy efficient, Union power ministry has launched two schemes namely National Energy Efficient Agriculture Pumps Programme and National Energy Efficient Fan Programme.

National Energy Efficient Agriculture Pumps Programme

- Smart BEE star rated Energy Efficient Agricultural Pump sets be distributed to farmers.
- Farmers can replace their inefficient agricultural pump sets free of cost.
- Pumps to come with Smart Control Panes that has a SIM card and a Smart Meter.
- Smart meters to ensure the farmers to monitor consumption on real time basis.
- EESL to distribute 200,000 BEE star rated pump-sets to the farmers under this programme, which will lead to 30% of energy savings by 2019.
- This translates into an annual savings of approx. Rs 20,000 crore on agricultural subsidies or a saving of 50 billion units of energy per year.

National Energy Efficient Fan Programme

- Energy-Efficient, 50 Watts and 5-Star Rated Ceiling Fans.
- These fans are 30% more energy efficient as compared to conventional fans.

Recommendations of Parliamentary Panel

- Elections of legislative assemblies whose term ends six months before/after the general elections to Lok Sabha should be clubbed together.
- Elections should be held in two phases. In 1st phase, elections to almost half of legislative assemblies should be held during the midterm of Lok Sabha and remaining elections should be held with the end of term of Lok Sabha.
- To hold early elections to state legislative assemblies along with other states/Lok Sabha, a motion for an early general election or a no confidence motion must be passed by the House.
- At present, two energy efficient fans will be provided to each consumer at Rs 60 a month per fan on EMI basis.
- Scheme will be available to the consumer on providing a copy of latest electricity bill along with a copy of residence proof at the designated distribution centre.
- Consumers can also purchase the fan by making UPFRONT payment of Rs. 1,250 for 50 watts fan.
- It is estimated that consumer’s electricity bill will reduce by about Rs 700-730 per year- which means that the cost of this fan can be recovered in less than 2 years.

1.9. ANMOL AND E-RAKTKOSH INITIATIVE

Why in News?
- On the occasion of World Health Day on April 7th, Govt. had launched new health initiatives and Mobile Apps.

ANMOL (ANM Online application)
- ANMOL is a tablet-based application that allows ANMs to enter and updated data for beneficiaries of their jurisdiction.
- This will ensure more prompt entry and updation of data as well as improve the data quality since the data will be entered at source.
- The Application is Aadhaar-enabled hence it will help in authentication of the records of field workers and beneficiaries.

E-RaktKosh initiative
- It is an integrated Blood Bank Management Information System (MIS).
- This web-based mechanism interconnects all the Blood Banks of the State into a single network.
- The Integrated Blood Bank MIS refers the acquisition, validation, storage and circulation of various live data and information electronically regarding blood donation and transfusion service.
- The Application will enable not only information of the nearest blood bank on a mobile but also of the availability of the particular blood group in a given radius.

1.10. MODEL ACT FOR FARM LAND LEASE BY NITI AYOG

Why in News?
- The NITI Aayog has proposed a Model Act for freeing up of farm land through leasing of land between farmers and farming cooperatives to boost farming.

Provisions of the proposed bill
- The Act provides recognition to farmers cultivating the agricultural land on lease to enable them to access loans through credit institutions, insurance, disaster relief and other support services provided by the government.
- It also protects the land rights of the owners.
- It also suggests legalizing “land leasing in all areas to ensure complete security of land ownership right for land owners and security of tenure for tenants for the agreed lease period.
- It also seeks to remove the clause of adverse possession of land in the land laws of various states as it interferes with free functioning of land lease market.
- It also proposes the automatic resumption of land after the agreed lease period without requiring any minimum area of land to be left with the tenant even after termination of tenancy.
- The Model Act proposes quicker litigation process in case of disputes, by suggesting recourse through criminal proceedings and special tribunal.
Impact
- It will create security among landowners to lease-out agricultural land.
- It had the potential to put to use millions of hectares of fallow land in the country.
- It will also provide landless poor, small and marginal farmers a means of livelihood and protection through access to bank credit and insurance cover.
- It would encourage large land owners to lease out land without fear of losing their land ownership rights and invest in non-farm enterprises.

1.11. AMENDMENTS IN THE COMPENSATORY AFFORESTATION FUND BILL, 2015

Why in News?
- On the basis of recommendation of standing committee, the Union Cabinet gave its approval to move official amendments in the Compensatory Afforestation Fund Bill, 2015.

Proposed Amendments
- It will make the list of environmental services inclusive and will delete some of environmental services for which credible model to assess their monetary value do not exist.
- It will provide for prior consultation with States Governments for making rule under the new legislation.
- It will also provide for establishment of State Fund of a Union territory having no legislature under Public Account of the Union of India.
- It will provide for use of monies realized from the user agencies in lieu for forest land diverted in protected areas for voluntary relocation from protected areas.
- To provide wider representation, it will include Secretaries of Ministries dealing with Space and Earth Sciences as members of governing body of the National Authority.
- It will also increase the number of expert members in governing body of National Authority from two to five.
- It will also increase the number of expert members in executive committee of National Authority from two to three.
- It will also include an expert on tribal matters or representative of tribal community as a member in both steering committee and executive committee of a State Authority.
- Amendments have fixed time limit of three months for Executive Committee of National Authority to approve annual plan of operations of State Authorities.

Impact
- It will ensure expeditious utilization of accumulated unspent amounts (approximately 40,000 rupees) available with the ad hoc CAMPA in an efficient and transparent manner.
- It will also facilitate timely execution of appropriate measures to mitigate impact of diversion of forest land.
- Utilisation of these amounts will result in creation of productive assets and generation of huge employment opportunities in the rural areas, especially the backward tribal areas.

1.12. NATIONAL INSTITUTIONS RANKING FRAMEWORK

(Please refer September 2015 Current Affairs for details on NIRF)
- This is the first time that an exercise of compiling rankings of various institutions has been undertaken by the Union government.
- The National Board of Accreditation (NBA) has undertaken the task of doing the ranking exercise.
- There are ranking methods for 6 categories of institutions i.e. Engineering, Management, Pharmacy, Architecture, Universities and Colleges.
• It declared the Indian Institute of Technology (IIT)-Madras the best institute for engineering and the Indian Institute of Management (IIM)-Bangalore the best for management.
• In the category of universities, the Indian Institute of Science, Bangalore, is rated the top-ranked institute followed by the Institute of Chemical Technology (ICT), Mumbai.

This framework outlines a methodology to rank institutions across the country. The parameters broadly cover
✓ Teaching
✓ Learning and Resources
✓ Research and Professional Practices
✓ Graduation Outcomes
✓ Outreach and Inclusivity
✓ Perception

1.13. CAPITAL PUNISHMENT IN 2015: AMNESTY REPORT

• Human rights group Amnesty International has published a new report on number of death penalty executions across the world.

Key Highlights of the Report
• The world saw the highest number of recorded executions in more than 25 years in 2015.
• At least 1,634 people were executed last year, an increase of more than 50% on 2014.
• Iran put 977 people to death in 2015, which is over 200 more than in 2014, and mostly for "drug-related offences.
• Pakistan executed 326 people in 2015, the highest number ever recorded by Amnesty in Pakistan.
• The U.S. carried out 28 executions, the lowest number since 1991.
• Four more countries abolished the death penalty for all crimes in 2015, and now the tally of abolitionist states to 102.

1.14. NEW PLANNING FRAMEWORK BY NITI AYOG

Why in news?
• NITI Aayog is working on a sector-based medium-term planning framework.
• The new planning framework could replace five-year plans. The last (12th five year plan) of which is set to end in 2016-17.

What is the new Framework all about?
• A medium term fiscal framework for 3 years may be adopted.
• It would entail prediction of estimates of expenditure and revenue for various items viz. Education, Health, Rural Development, Energy, etc. for the next two or three years.
• Expenditure commitments will be shown separately for Revenue and Capital expenditure as recommended by Dr. C Rangarajan in a report - Efficient Management of Public Expenditure, 2011.
1.15. UTTARAKHAND PRESIDENT’S RULE RECENT DEVELOPMENTS

Note: Please read this in continuance with previous write-ups covered on this topic in Vision IAS Current Affairs in Feb and March 2016.

- The Uttarakhand High Court quashed the President’s Rule in Uttarakhand and ordered that a floor test must be held in the Uttarakhand Assembly on April 29 where former Chief Minister’s claim of having majority support shall be put to test.
- HC also opined that the power of judicial review is with courts and the material placed before the President by the Governor is also open to judicial review.
- Later while hearing the center’s appeal against HC’s decision, Supreme Court restored the President’s rule in Uttarakhand because judgment issued by Uttarakhand government was not available for court to proceed further.
- At the same time, government also gave the written undertaking that government will not revoke President’s rule as a ploy to form government in the state.
- After getting the judgment copy of Uttarakhand High Court, the Supreme Court asked the Centre to answer seven questions, such as
  ✓ Can a delay in the floor test be a ground for proclamation of President Rule?
  ✓ Can proceedings of an assembly be taken as ground for imposition of President’s rule?
  ✓ The Supreme Court also asked the Centre to specify what exactly qualifies as perception of destabilization?
2. INTERNATIONAL/INDIA AND WORLD

2.1. FOURTH NUCLEAR SECURITY SUMMIT (NSS)

Why in news
US President hosted the fourth and latest nuclear security summit at Washington.

Background
- Nuclear Security Summit (NSS), an initiative of President Barack Obama to coordinate international efforts to prevent terror organizations from acquiring nuclear weapons or material.
- The first Nuclear Security Summit was held in Washington, DC in 2010, and was followed by Summits in Seoul in 2012 and The Hague in 2014.

Goals of 4th NSS
There are twin goals for the 2016 Nuclear Security Summit:
- advancing tangible improvements in nuclear security behavior
- Strengthening the global nuclear security architecture.

Major Outcome of 4th summit
- Summit endorsed the central role of the IAEA in promoting nuclear security
- The summit adopted five action plans pertaining to the UN, IAEA, Interpol, the Global Initiative to Combat Nuclear Weapons (GICNT) and the Global Partnership Against the Spread of Nuclear Weapons and Materials of Mass Destruction - the latter two being informal arrangements among a number of states.
- This summit brought a timely new focus on the link between nuclear security and cyber security.
  - Interpol’s “Operation Fail Safe” initiative deals with the potentially dangerous nexus between cyber-attacks and nuclear risks.

What are the achievements of the NSS?
- Since April 2009 more than 3.2 metric tons of vulnerable highly enriched uranium (HEU) and plutonium have been removed or disposed of.
- Thirteen countries and Taiwan have become HEU-free.
- Physical security upgrades have been completed at 32 buildings storing weapons-usable fissile materials.
- Radiation detection equipment has been installed at 328 international border crossings, airports, and seaports to combat illicit trafficking in nuclear materials.
- There has been a verified shutdown or successful conversion to low enriched uranium (LEU) fuel use of 24 HEU research reactors and isotope production facilities in 15 countries.

What has been India’s contribution to the NSS?
India has played an active role in these summits.
- India made a voluntary contribution of one million dollars to the Nuclear Security Fund.
- Established a Global Centre of Excellence for Nuclear Energy Partnership (GCENEP) in New Delhi.

Prime minister announcement at 4th NSS
Prime Minister has announced several key initiatives at 4th NSS taken by his government in the area of nuclear security and non-proliferation.
- The plan includes development and deployment of technology to deter and defend against nuclear terrorism.
  - Physical and cyber barrier.
Technological approaches.
• Setting up a facility for medical grade ‘Moly-99’ using low enriched Uranium.
• Using vitrified forms of vulnerable radioisotopes such as Cesium-137.

India will participate in the informal international “contact group”, which fosters cooperation in countering nuclear smuggling.

India has also announced that none of its research reactors will be using HEU henceforth.

India will host a meeting of Global Initiative to Combat Nuclear Terrorism in 2017.

An international conference on countering nuclear smuggling is also being planned with Interpol.

India will support IAEA’s central role in nuclear security by a further contribution of USD 1 million to the nuclear security fund.

A workshop with IAEA experts on International Physical Protection Assessment Service (IPPAS) will also be held in India.

India will join trilateral initiative of NSS chairs circulated at IAEA by subscribing states as the joint statement on strengthening nuclear security implementation.

India will also join three gift baskets for this summit in priority areas of countering nuclear smuggling, nuclear security contact group in Vienna, and sharing of best practices through Centres of Excellence such as India’s own.

PM used the summit to focus on the threat to nuclear security posed by state sponsorship of terrorist groups and pursuit of risky escalatory policies such as the deployment of theatre nuclear weapons.

Criticism of NSS
• The NSS focus is on enforcing nuclear security in the non-military.
  ✔ With the process limited to non-military purposes, 83 per cent of nuclear material is outside its ambit.
• The NSS has not been able to amend the IAEA’s convention on nuclear safety.
  ✔ That there is no legally binding outcome at the end of six years of the NSS process is seen as a major drawback.
• The NSS has focused on asking countries to tighten their national laws, rules and capabilities on nuclear security.

This has meant that military facilities are treated as national responsibilities and dealt with as per international obligations.

Limitations of the Summit
✔ The action plans adopted at 4th summit are non-binding for states.
✔ 4th summit was not attended by Russian President. Russia houses the largest number of number of nuclear weapons.
✔ Threat of nuclear terrorism cannot be eliminated till world possess nuclear weapons. There is no tangible progress in direction of complete nuclear disarmament.

2.2. 13TH INDIA-EU SUMMIT

Why in news
The 13th EU-India Summit was held in Brussels on March 2016.

Outcome of summit
The 13th India-EU Summit concluded in Brussels without a consensus on a bilateral free trade deal even as progress was made in bilateral cooperation in other fields -- from foreign policy to outer space.

Major outcomes
EU-India Agenda for Action-2020
A common road map for the strategic partnership in the next five years has been charted out.
Foreign Policy and Security Cooperation: Strengthen foreign policy cooperation, in areas of mutual interest such as Asia, Africa, the Middle East, Europe, and other relevant areas.

Security: Strengthen cooperation and work towards shared objectives of non-proliferation & disarmament, counter-piracy, counter-terrorism, counter-radicalization and cyber security.

The two sides agreed to cooperate in countering violent extremism, disrupt recruitment of terrorists and prevent the free passage of foreign fighters.

They have also agreed to explore the possibility of India and EUropol, the EU law enforcement agency, to share intelligence.

The Common Agenda on Migration and Mobility (CAMM), which was also adopted, is designed to control and organize migration a pressing concern for the EU.

The Agenda also includes the prevention of human trafficking and promoting international protection as priority areas.

Joint Declaration on a Clean Energy and Climate Partnership.

Both sides agreed to further the negotiations on early conclusion of the BTIA.

The European Investment Bank (EIB) signed an agreement with India to release first tranche of 200 million euros of its total 450 million euros loan towards the construction of Lucknow Metro.

Deadlock in Broad-based Trade and Investment Agreement (BTIA)

The BTIA negotiations have remained deadlocked over growing differences regarding greater market access sought by both sides for merchandise exports.

EU’s main Demands

- EU has been keen on reducing or abolishing tariffs in several sectors, including in the automobile and wine and spirits sectors.
- India’s import duty on cars is between 60 and 120 per cent as against the EU’s 10 per cent.

India’s main demands

- India’s main demands on data security status (crucial for India’s information technology sector to do more business with the EU firms), easier temporary movement of skilled professionals and seamless intra-corporate movement.
- The EU should do away with their non-tariff barriers that seem to have been erected mainly to protect some of their local firms but not as much for better safety or quality.
- India has also sought agricultural market access in the EU as well as disciplining of Sanitary and Phyto-sanitary (norms related with plants and animals) and Technical Barriers to Trade.

Importance of EU

- The European Union is our largest trading partner, export destination and largest source of FDI.
- However, India’s exports to EU in 2014-15 had shrunk (-) 4.4 per cent year on year to $49.3 billion. Imports from EU had also contracted (-) 1.5 per cent in 2014-15 to $49.2 billion.

Other major issues between India and EU

- Human rights violation: One of the ostensible reasons for stalled talks between the European Union (EU) and India had been the EU concern over human right violations in India.
- Italian marine’s case has also played a spoiler in the EU-India relationship.
- Arbitrary Ban: In August 2015, India had deferred negotiations on the FTA over the EU imposing a ban on sale of around 700 pharmaceutical products
2.3. INDIA-USA

Why in news
The U.S. Secretary of Defense Ashton Carter paid a three day visit to India in April.

Major outcomes
During the visit, both sides reached an ‘in-principle’ understating to conclude Logistics Exchange Memorandum of Agreement (LEMOA).

- Once concluded, the agreement would give American aircraft and warships access to Indian military bases for logistical purposes, including refueling and repair. In turn, India’s military will enjoy similar access to U.S. bases.
- In addition to LEMOA, two “pathfinder projects” were announced, to co-develop a Digital Helmet Mounted Display; as well as a Joint Biological Tactical Detection System.

Maritime security cooperation
- India’s sustained multi-year commitment to participating in the RIMPAC multilateral naval exercise. Rim of the Pacific Exercise, is the world’s largest international maritime warfare exercise.
- A promise to expeditiously conclude a “white shipping” technical arrangement to improve data sharing on commercial shipping traffic.
- An agreement to start Navy-to-Navy discussions on submarine safety and anti-submarine warfare.

Analysis
- By agreeing to sign the LEMOA, India has sent out a signal that it has no inhibitions about strategic engagements with the U.S. This would qualitatively transform India’s relations with the U.S.
- Many observers feel that New Delhi must take a considered view of the repercussions that such a strategic alliance may have for India’s relations with other countries.
- Some argue that it may affect India’s independent foreign policy.

U.S.-India Defence Technology and Partnership Act India-U.S. defence cooperation has witnessed an unprecedented boom for well over a decade now with the aggregate worth of defence acquisitions from Washington exceeding $10 billion.

- Recently the U.S.-India Defence Technology and Partnership Act was introduced in the US Congress, which places India on a par with its NATO allies in terms of trade and technology transfer, specifically elevating its status as a defence exports market.
- The Act would “institutionalize” the Defence Technology and Trade Initiative (DTTI) framework between the two countries and the India Rapid Reaction Cell (IRRC) in the Pentagon.
- The IRRC launched in 2012 to deepen high technology cooperation and move towards co-development and co-production of high technology platforms.

2.4. INDIA-SAUDI ARABIA

Why in news
The Prime Minister paid first official visit to Saudi Arabia in the month of April.

Highlights of the Visit
- He is the fourth Indian PM to visit Saudi Arabia after Dr. Singh in 2010, Indira Gandhi in 1982 and Jawaharlal Nehru in 1956.
• He presented a gold-plated replica of the Cheraman Juma Masjid, considered to be the first mosque in India built in 629 AD, to King Salman of Saudi Arabia.
• He was conferred the Arabian country’s highest civilian honour — the King Abdulaziz Sash.

List of Agreements/MOUs signed during the visit
• Agreement on Labour Co-operation: For Recruitment of General Category Workers.
• Technical Cooperation Program between the Bureau of Indian Standards (BIS) and the Saudi Standards, Metrology and Quality Organization (SASO).
• Executive Program for Cooperation in the Field of Handicrafts between the Export Promotion Council for Handicraft (EPCH) and Saudi Commission for Tourism and National Heritage.
• MoU between Financial Intelligence Unit - India and the Financial Intelligence Unit-Saudi Arabia concerning Cooperation in the Exchange of Intelligence related to Money Laundering, Terrorism Financing and Related Crimes.
• Framework for Investment Promotion Cooperation between Invest India and the Saudi Arabian General Investment Authority (SAGIA).

Significance of visit
• The visit marked the elevation of ties between the two countries as seen in up gradation of three key agreements — the energy security partnership of 2008, the strategic partnership of 2010 (which has included robust anti-terror cooperation), and the defence partnership of 2014.
• The second possibility is improving the trade and investment relationship. Bilateral trade at about $40 billion must be built beyond its current oil dependence.
• Investment opportunities for India: The Saudi government is pitching its mega project, the King Abdullah Economic City, with a deep-sea port as a connector between the East and the West, and wants India to see it as a gateway to its new forays into Africa.

Importance of Saudi Arabia
Maintaining vibrant ties with Saudi Arabia is imperative for India’s energy security and national security.
• Saudi Arabia is India’s largest supplier of crude oil.
• India is the largest recipient of foreign remittances from the kingdom.
• Of the 11 million Indians working in West Asia, nearly three million are in Saudi Arabia. Therefore, stability in the region, and particularly in Saudi Arabia, is high on India’s core agenda.
• In recent years, bilateral ties had acquired a security dimension with both countries stepping up cooperation in counter-terrorism and intelligence-sharing.
• Riyadh also extradited several terror suspects to India.
• Saudi Arabia can force Pakistan to abandon its anti-India foreign policy.

Importance of India for Saudi Arabia
• Economic Strain: Due to persistently weak oil prices and competition from a sanctions-free Iran entering the global economic mainstream, India is a vital market for Saudi Arabia.
• Change in U.S. policy: The U.S. is no longer as dependent on the region for energy as it used to be. Also, U.S. is more accommodative towards Iran to bring peace in west Asia.
• Friction with Pakistan: Islamabad renewing its ties with Tehran. Pakistan also refused to join Saudi Arabia’s war coalition against the Iran-backed Shia rebels (Houthi) in Yemen.

Critical Issues with Saudi Arabia
• Saudi-Pakistan relation: Pakistan is a “Historic ally” of the Saudis.
• Saudi-Iran rivalry: destabilizing West Asia and influencing West Asian geopolitics.
• Ideological problem
  ✓ While Saudi Arabia denounces all forms of terrorism, Saudi money is funding Wahhabi Islamic groups around the world.
Many extremist outfits are inspired by the Wahhabi branch of Islam.

- **Saudi Arabia’s aggressive foreign policy in West Asia**
  - In *Syria*, Saudi support for rebels has played a key role in destabilizing the regime, leading to the rise of *Islamic State*.
  - In *Yemen*, the war has unleashed chaos and humanitarian catastrophe, creating conditions for *radicalism to flourish*.

- India’s close relation with *Iran* may antagonize Saudi Arabia. *India* has to balance its ties with all three regional power in *West Asia*-Iran, *Israel* and Saudi Arabia.

**India’s west Asia policy**

For decades, India was a *passive player in West Asia* - a beneficiary of good relationships with multiple actors. Historically, India’s West Asia policy has been multi-directional.

- **During the Cold War years**, India maintained close economic cooperation with both *Saudi Arabia* and *Iran*, the rival poles in regional geopolitics.

- **In the post-Soviet world**: The bi-directional approach has been expanded to a tri-directional foreign policy to accommodate the three key pillars of West Asia — *Saudi Arabia*, *Iran* and *Israel*.

- In 2010, India and Saudi Arabia signed Riyadh Declaration, which set the framework for enhanced cooperation in the security, defence and economic spheres. Since then, there has been marked improvement in security cooperation and intelligence sharing between India and Saudi Arabia.

- *Prime Minister* visit to Riyadh reflects a resolve to deepen India’s engagement in West Asia.

### 2.5. INDIA-MALDIVES

**Why in News**

Maldives President Abdulla Yameen Abdul Gayoom paid official visit to India in the month of April.

**Highlights of the Visit**

India and Maldives signed six agreements in different sectors including avoidance of double taxation, conservation and restoration of ancient mosque, tourism and defence.

**Following are the list of agreements**

- Action plan for defence cooperation
  - Important component of India-Maldives relationship and the shared strategic and security interests of the two countries in the Indian Ocean region.
  - The Action Plan envisages an *institutional mechanism* at the level of the Defence Secretaries to further bilateral defence cooperation.

- Agreement related to Orbit Frequency Coordination of "*South Asia Satellite*" proposed at 48oE.
  - The agreement shall be used for the purpose of performing intersystem orbit-frequency coordination for the operation of 'South Asia Satellite'; and fulfilling ITU level regulatory requirements and obtaining *international level protection/recognition* for the ‘South Asia Satellite’.

- *MoU* for cooperation in the area of conservation and restoration of ancient mosques and joint research and exploratory surveys in Maldives.

- *MoU* on cooperation in the field of tourism.

- Agreement for the exchange of information with respect to taxes.

- Pact for avoidance of double taxation of income derived from International Air Transport.

**India’s support in the Commonwealth Ministerial Action Group (CMAG)**

- Maldivian President has thanked India for “protecting” his country from possible punitive actions from the Commonwealth Ministerial Action Group (CMAG), which had been asking *Maldives to move towards genuine democracy*. 
Mr. Yameen drew international criticism in November, 2015 after he declared national emergency. The Emergency was withdrawn later.

Analysis
Maldives is important country in Indian Ocean region (IOR). Relations between India and Maldives have witnessed many ups and downs.

- India is mainly concerned about growing ties between Maldives and China.
  - China is assisting Maldives in some infrastructure and developmental projects,
  - Maldives is also part of China's Silk Road project.
  - Male had terminated the agreement it entered into with GMR in 2010 for the modernisation of the International Airport. The project was subsequently given to a Chinese company.
- India's help to Maldives.
  - Indian Army's 'Operation Cactus' foiled a coup in Maldives that was attempted by a pro-Eelam group in 1988. India maintains a naval presence in Maldives, at the request of the Maldives, since 2009.
  - In December 2014 India dispatched “water aid” to the Maldivian capital of Male, after a fire destroyed the generator of its biggest water treatment plant.
  - India had assisted Maldives' election process by sending its observers.

2.6. INDIA AND IRAN

Why in News?
India’s Minister of State for Petroleum and Natural Gas visited Iran in the month of April

Key outcome of the visit
- In a meeting between Mr. pradhan and his Iranian counterpart Bijan Namdar Zanganch, it was announced that India and Iran will seal ‘development, financial and commercial’ terms to develop the prolific gas project, Farzad B, in the Persian Gulf latest by October 2016. The Farzad-B field was discovered by Indian explorers in 2012.
- Following lifting of sanctions against Iran, India has been eying deeper energy ties with Iran and has already lined up USD 20 billion as investment in oil and gas as well as petrochemical and fertiliser projects there.
- Iran is an important country for India for its energy security as well as to get access to oil and gas-rich Central Asian nations.

2.7. CHINA AND SRI LANKA

Why in News?
Sri Lanka’s Prime Minister Ranil Wickremesinghe paid official visit to china in April.

Significance
The visit came in the backdrop of recent decision by Sri Lanka to clear the stalled $1.4 billion Colombo Port City, which had China as a partner.

Outcome of visit
- “A comprehensive economic strategy” between Sri Lanka and China had been defined, which would be relevant for the next two decades.
- China and Sri Lanka have decided to redefine the Colombo Port City project by making it an international financial outpost in the Indian Ocean, as part of the 20-year framework plan.

India’s concerns
Observers say that China’s growing influence in South Asia poses a challenge to India, which could do well to revamp its neighbourhood policy.
China has identified development of string of ports in the Indian Ocean including Kyaukphyu in Myanmar, Hambantota in Sri Lanka, Gwadar in Pakistan, along with a military logistics base in Djibouti.

China also attaches centrality to Sri Lanka to amplify its Maritime Silk Road.

### 2.8. U.S.-SAUDI RELATIONS

**Why in news?**

U.S. President Barack Obama visited Saudi Arabia to attend a regional summit of Gulf leaders.

**Rift in the U.S.-Saudi alliance**

With the region witnessing massive changes, this partnership has come under enormous strain. There has been distrust and disagreement over how to contain Iran, the fight against the Islamic State, the future of Syria and clashes in Yemen.

- **Egypt**: Washington refused to protect the regime of Hosni Mubarak.
- **Syria**: The Obama administration is against bombing Bashar al-Assad’s regime because it thinks a collapse of the state in Syria would help the Islamic State.
- **Iran**: Saudi Arabia was against Iran nuclear deal. U.S. wants Iran to play a more responsible role in regional politics, especially in stabilizing Iraq and defeating the IS in Syria; both are vital for American interests in the region.
- **Anti-Saudi sentiments in U.S.**
  - ‘9/11 bill’: A legislation tabled in the Senate which if passed would allow victims of the 9/11 terrorist attack to sue Saudi Arabia.
  - **Saudi aggression in Yemen**: Strategic thinkers point out that the Saudi military campaign has allowed al-Qaeda in Arabian Peninsula (AQAP) a free rein in Yemen.
  - Civil society groups focused on the human misery caused by the Saudi action in Yemen.

**Reasons for change in U.S. policy**

- U.S. is no longer dependent on the Gulf for oil, thanks to its domestic shale boom.
- The realization in Washington that it needs Iran to stabilize the region.

**Analysis**

Divergence of U.S. stand in many issues in west Asia does not mean it is going to abandon Riyadh or embrace Tehran. Both the U.S. and Saudi Arabia still need each other.

- The U.S. provides military and intelligence support to the kingdom for its regional security.
- Saudi Arabia helps fight terror groups like al-Qaeda and remains the second-largest provider of oil imports to the United States.
- The U.S. is still committed to the security of its Gulf allies.
- On the other side, Washington and Tehran do not even have full diplomatic relations.

### 2.9. YEMEN CEASEFIRE

**Why in News?**

A United Nations-backed ceasefire between the Saudi-allied forces and Shia Houthi rebels took effect in Yemen.
Background

The conflict in Yemen is rooted in the complex geopolitics of the region. Saudi Arabia sees the Houthis as a front for Iran and does not want a Shia-dominated government in its backyard. Iran on the other hand has accused Saudis of fueling the conflict.

Saudi Arabia led Sunni Arab allies

- Saudi Arabia and its allies started bombing Yemen in March 2015 with the goal of reinstating the ousted government of President Hadi and weakening the Shia Houthi rebels who had captured the capital Sanaa.
- But after a year of relentless bombing by Riyadh, the Houthis still hold the capital city and control much of western Yemen.

Impact of conflict on Yemen

- Rise of extremist
  - The stateless chaos amid a disastrous war has helped al-Qaeda in the Arabian Peninsula (AQAP) expand its footprint steadily in the country, and it now runs a mini state in southeastern Yemen.
- Humanitarian catastrophe
  - More than 6,000 people, half of them civilians, have been killed since the Saudi bombing started, and about two million have been displaced.
  - An estimated 80 per cent of the population needs humanitarian assistance, while millions of children face malnutrition.

Way forward

Three previous attempts to reach a ceasefire collapsed due to difference between Iran and Saudi Arabia.

Any practical solution will require an end to external military intervention and a cessation of violence, followed by the formation of a government of national unity.

(Note: Please refer Vision Current affairs March 2015 for complete coverage of Yemen crisis)

2.10. ELUSIVE PEACE IN AFGHANISTAN

Why in News?

A massive bomb blast in the heart of Kabul on 19 April marked the beginning of the 2016 fighting season in Afghanistan. Taliban had announced the launch of ‘Operation Omari’.

Taliban strategy

- To inflict casualties in major cities using bomb blasts and suicide attacks to demonstrate that they can hit even the most protected targets.
- To try to occupy a provincial capital for a few days to expose the limits of Kabul’s authority.

Peace talk

Quadrilateral Coordination Group (QCG), consisting of the U.S., China, Pakistan and Afghanistan, has been created to facilitate the process of direct talks between the Taliban and the Afghan government.

- The Taliban had categorically rejected talks with the Afghan government as long as the U.S. retained a military presence in Afghanistan.
- President Ghani’s efforts at securing Pakistan’s cooperation to kick-start peace talks with the Taliban have been a failure.
- The hope that China would use its influence on Pakistan has been belied.
• The U.S., sensing growing vulnerability of the National Unity Government (NUG), has announced that the current strength of its forces deployed in Afghanistan will continue till the end of the year.

Fragile National Unity government (NUG)

The U.S. had finessed the highly controversial 2014 presidential election by pushing the two contenders into a National Unity Government and the creation of the position of a chief executive.

• The Afghan constitution provides for a presidential system; however, the understanding was that within two years, by September 2016, the constitution would be suitably amended to convert the chief executive’s position into that of a prime minister, and executive power would be shared.
• This needed fresh parliamentary elections, which were to take place after electoral reforms were introduced by an Independent Election Commission. None of this happened because the Commission has not been constituted; consequently, parliamentary elections cannot be held.
• Differences between President Ghani and Chief Executive Abdullah have paralysed governance.

India’s role in peace process

The U.S. is now more open to a larger role for India in Afghanistan, partly due to its frustration over Pakistan’s failure or unwillingness to deliver on the promises.

• The U.S. has welcomed India’s efforts in reconstruction, development and institution-building in Afghanistan, but maintained ambiguity on its security role.
• At Pakistan’s insistence, U.S. has kept India out of the Afghanistan peace negotiations.
• India and Afghanistan had signed the Strategic Partnership Agreement in 2011, but security cooperation slowed as both sides sought not to antagonise Pakistan.
• Prime minister recent visit to Afghanistan and India’s transferring of three Mi-25 attack helicopters to the Afghan Air Force (AAF) recently indicate fresh thinking on the Indian side.

2.11. THE INTERNATIONAL CONFERENCE OF ZERO

Why in News

• The international Conference on Zero was held at UNESCO headquarters to celebrate the rich and remarkable history of mathematics in collaboration with India on 6 April.
• The conference showcased Indian contribution to maths and sciences which the world doesn’t know too much about.
• Human Resource Development Minister led the Indian delegation at the “International Conference of Zero”, and gifted a bronze bust of Aryabhata to the UNESCO headquarters.

Significance

• The event at UNESCO was an addition to the efforts to showcase India’s soft power by harnessing the power of zero.
• Earlier, India sponsored International Yoga Day and a Sanskrit conference at the UNESCO.

2.12. UIGHUR LEADER DOLKUN ISA’S VISA ISSUE

Why in News:

Visa granted earlier this year to Chinese dissident leader and Uighur activist Dolkun Isa was cancelled by the government of India.
Background

- Mr. Isa, a leader of the Germany-based World Uighur Congress (WUC). He had been granted an electronic visa by India to attend a conference in Dharamsala. India’s decision to permit WUC leaders reported to be in response to Beijing’s blocking a ban on JeM chief Masood Azhar in the UN.
- Xinjiang, which has over 10 million Uyghur population of Turkic origin Muslims, is on unrest for several years against large-scale settlements of Hans from other part of the country.
- China blames East Turkistan Islamic Movement (ETIM), a militant Islamist group, for terrorist attacks in Xinjiang and other parts of the country.

Chinese response

China aired its concern over World Uighur Congress (WUC) leader Dolkun Isa’s reported visit to India, saying he is a “terrorist” on Interpol’s Red Corner.

Analysis

- Many observers believe that the decision to revoke the visa issued to Chinese dissident Uyghur leader Dolkun Isa has averted a bigger diplomatic face-off with Beijing.
- Indian government should be very careful while granting visa to any person on Interpol’s red corner notice or terrorist watch list because it may affect India’s global standing.
  ✓ India has always advocated that all charges of terrorism must be treated equally, that there can be no distinction between “good” and “bad” terrorists.
  ✓ India’s moral positions on terrorism have benefited its global outreach on crucial issues.

2.13. PRESIDENT VISIT TO PAPUA NEW GUINEA

Why in News

President of India paid first ever official visit to Papua New Guinea since the establishment diplomatic ties between the two countries.

Highlights of the President visit

- Four Memorandum of Understanding (MoUs) in the areas of agriculture, health, information technology and infrastructure.
- Line of credit of $100 million to Papua New Guinea for infrastructure projects including a pact to set up a Centre of Excellence in information technology.
- India is looking to explore and develop Papua New Guinea’s vast oil and gas resources through joint ventures and investments.
- Papua New Guinea reiterated its support for India’s claim for permanent membership in the UN Security Council and agreed to expedite a proposed Bilateral Investment Promotion and Protection Agreement (IPPA) to facilitate investments.
- It announced visa-on-arrival facility for Indian tourists.
- FIPIC, the Forum for the India-Pacific Islands Cooperation, a multilateral forum launched by Prime Minister in November 2014.
- India considers its cooperation with the islands of the Pacific to be a key component of ‘Act East’.
3. ECONOMY

3.1. PRIORITY SECTOR LENDING CERTIFICATES (PSLCs)

Why in news?
RBI issued a notification on 7 April permitting the issue and trading of PSL certificates, whereby banks can buy and sell such credits to manage their priority sector lending requirements.

What is PSLCs?
- PSLCs are tradable certificates issued against priority sector loans of banks so as
  - To enable banks to achieve their specified target and sub-targets for priority sector lending through purchase of these instruments in the event of a shortfall.
  - At the same time incentivizing the surplus banks to lend more to these sectors.
- On lines of carbon credit trading the goal of PSLCs is to allow market mechanism to drive priority sector lending by leveraging the comparative strength of different banks.
- All Scheduled Commercial Banks (including Regional Rural Banks), Urban Co-operative Banks, Small Finance Banks (when they become operational) and Local Area Banks are eligible to participate in the trading.

Types of PSLCs
There would be four kinds of PSLCs:
- PSLC Agriculture: Counting for achievement towards the total agriculture lending target.
- PSLC SF/MF: Counting for achievement towards the sub-target for lending to Small and Marginal Farmers.
- PSLC Micro Enterprises: Counting for achievement towards the sub target for lending to Micro Enterprises.
- PSLC General: Counting for achievement towards the overall priority sector target.

Rationale
- Currently many banks find it difficult to meet their PSL requirement as they may not find it viable to lend to the rural or MSME sector.
- Despite agriculture being a prime focus, no substantial gain in capital investment has happened in agriculture because banks tend to lend for short term just to fulfill RBI norms (Economic Survey 2014-15).
- More than half the PSBs (16 of 26) couldn’t achieve the 18 per cent agriculture target in 2014, while 13 of the 20 private sector banks failed to achieve sub-targets for agriculture.

Benefits
- Banks unable to meet their priority sector lending targets now have a more viable and easier way to make good their shortfall.
- It offers banks a seamless platform to buy and sell their priority lending targets.
- A bank that is focused on priority sector lending say, agriculture, now has the flexibility to issue and sell certificates with ease in the secondary market.
- Earlier, when a bank fell short of its target, it had to buy out such loans from others, which essentially meant an increase in the buyer bank’s balance sheet. But now a bank can buy certificates from another bank to fulfil its requirements without taking on the loans in its books.
- The payment which a buying bank has to make for the PSLCs will be market determined. The price could depend on a host of factors such as the category of loans and demand and supply scenario.
- Issue of banks scrambling towards the year-end to meet their targets will also be resolved. As per RBI guidelines, a bank is permitted to issue PSLCs up to 50 per cent of the previous year’s PSL achievement without having the underlying loans in its books.
- It allows the Banks to focus on their strengths and purchase credits from banks with expertise in making such loans (to Priority sector), instead of diverting their own resources towards meeting priority sector lending targets.
- Each bank can focus on its efficient areas.
Larger social objective of loans to priority sectors and weaker sections of society will be met without burdening each bank with the specific responsibility of doing so.

Possible Concerns
- All the risk lies with the lender with almost no downside risk to the buyer of the PSL certificates
- Lending banks may roll out more than required loans to make profit by selling extra PSL certificates.

Conclusion
RBI’s move on PSL certificates is an extremely innovative initiative, and one that was long pending (it was first mooted in the Raghuram Rajan committee report of 2008). It has the potential to usher in large efficiencies in Indian banking, without sacrificing on any of the larger inclusion and equity goals. However care must be taken that banks don’t involve too much in chasing fees through excess PSL trading. Secondary trading of such certificates should also be checked.

3.2. CENTRE-STATE INVESTMENT AGREEMENT FOR BILATERAL INVESTMENT TREATIES (BIT)

Why in news?
In a Budget proposal, Union Finance Minister mooted the idea of a Centre-State investment agreement to be signed between the Centre and various State governments to ensure effective implementation of BITs or bilateral investment treaties.

What is a BIT?
- BITs protect investments made by an investor of one country into another by regulating the host nation’s treatment of the investment.
- It includes provisions like non-discriminatory treatment, protection against nationalization, Investor State Dispute Settlement (ISDS) provision requiring investors to exhaust local remedies before commencing international arbitration etc.

What is the Centre-State Investment Agreement (CSIA)?
- It is a voluntary agreement between state and centre where states will be required to fulfill their obligations under the BITs.
- India’s BIT partners will be informed about states, which don’t sign the agreement.

Benefits
- States that sign the CSIA will be seen as a more attractive destination for investments.
- It will ensure better concurrence between centre and state and will better the “ease of doing business”.

Criticism
- Even without the CSIA, under Art 253 of the constitution centre can make legislations to give effect to international agreements, which are binding on states.
- Under the concept of sovereignty, even if states don’t fulfill their obligations under CSIA, it is the centre that is held responsible.
- States may see this as shifting the blame of violation of BIT to states.
- States that may not sign the CSIA may be seen unsafe for investment, which may further increase the regional imbalance wrt to investments.

Way Ahead
- It is better to sensitize the state government of various provisions of BIT and their obligations under it.
- Consultations with states with respect to international treaties can be institutionalized. For example, forums like NITI Aayog governing council or erstwhile NDC can be created.
- This would be in line with the concept of co-operative federalism and will ensure better implementation of international treaties.
3.3. UNIFYING AGRICULTURE MARKETS

Background
- As per the Economic Survey 2014-15, India has 2477 principal regulated primary agriculture markets.
- These are governed by APMC Act of the respective states, which has led to market segmentation, exploitation by middlemen & inefficiencies.
- The government launched the National Agriculture Market Scheme in July 2015 in 585 markets and in April 2016 started e-trading on pilot basis.
- A similar successful experiment was conducted in Karnataka, called as the Rashtriya electronic Market Scheme (ReMS), to unite principal markets in e-platform.

Lessons learnt from Karnataka Model
- Despite considerable success, the progress has been slow because of failure to involve various stakeholders like farmers, agents, traders, APMCs, government etc.
- Though middlemen extract rents but they provide timely loans and credit facilities to the farmer. So, it is important to involve them and remove their fears before unifying markets.
- Similarly, over dependence on technological solutions will be slow and may not give desired effect.

Way Ahead
- All stakeholders should be taken on board before attempting a unification of the agricultural markets.
- All states have a uniform policy as proposed by the Model APMC Act so that a national market in the true sense can be created.

3.4. TRADE FACILITATION AND TRADE ENFORCEMENT ACT 2015

Why in news?
On Feb 2016, President Barack Obama signed the Trade Facilitation and Trade Enforcement Act, which introduces important measures relating to intellectual property rights (IPR) issues.

Background
- United State Trade Representative (USTR), which oversees enforcement of US trade policy, including IP policy, brings out the annual Special 301 list. It categorizes countries based on their IPR rules:
  - Priority Foreign Countries (PFC) – most serious violators
  - Priority Watch List (PWL) – Serious offenders
  - Watch List (WL) – less serious offenders.
- India is placed in the PWL for the last 2 years.

Key Provisions of the Act that may influence India
- The Act requires USTR to develop action plans with benchmarks for countries in PWL list, unilaterally.
- Trade sanctions for countries that refuse to comply with benchmarks can be taken.
- It creates a new position within the office USTR titled “Chief Innovation and Intellectual Property Negotiator” which would protect US innovations and IP interests.
- It also created a separate fund for taking legal actions against foreign countries to ensure fair and equitable market access for US.

Impact on India & way forward
- This will further pressurize India to align its IPR policy in line with US interests especially related to pharmaceuticals.
- However, India should resist such pressure and ensure that its laws comply with WTO norms.
- In addition, India should engage with US to resolve such issues bilaterally.
3.5. LABOUR BUREAU SURVEY ON EMPLOYMENT 2015

Findings of the survey

- New jobs in eight labour-intensive industries fell to a six-year low in the first nine months of 2015 — with just 1.55 lakh new jobs being created.
- By contrast, 3.04 lakh new jobs were added in January-September 2014 and 3.36 lakh in the same period of 2013.
- Contractual jobs also declined by 21,000 in Jan –Sept 2015 against increase of 1.2 lakh in the corresponding period of 2014.
- The survey found that gems & jewellery sector saw 19,000 job loss during 2015 followed by handloom/Powerloom at 11,000.
- The employment decreased by 8,000 each in leather and automobiles sectors while 4,000 jobs loss was recorded in transport sector.

About the survey

The Labour Bureau, under the Ministry of Labour and Employment, started conducting this quarterly survey after the 2008-09 global crisis to gauge its impact on employment in eight crucial sectors — textiles, leather, metal, automobiles, gems and jewellery, transport, information technology (IT) and handloom.

3.6. E-COMMERCE IN INDIA

Why in news?

The report by CII-DELOITTE REPORT calls the e-commerce in India as a game changer for the economy.

Reasons

- By 2020, B2B (Business to Business) model is expected to see a 2 fold increase while B2Cb(Business to Customer) will see 7 fold increase.
- On a long term it has potential to generate employment, increase export revenues and enhance tax collections.
- Since B2B model is showing more acceptability, this would see an increase in the number of MSMEs and entrepreneurs from hinterland.

Challenges to e-commerce industries

- Lack of uniform taxation across states leading to difficulty in movement of goods.
- Logistics issues and infrastructure.
- Payments and banking penetration as cash transaction comes with high administration cost.
- Internet penetration.
- Skilled manpower.

Recommendation by the report

- Uniform tax structure in the form of GST to ensure free flow of goods.
- Timely implementation of programmes like Digital India, Skill India, Startup India etc to support e-commerce ecosystem and rural penetration.
- Increasing the number of years within which the tax holiday can be availed by startups in the e-commerce industry.
3.7. MARATHWADA DROUGHT AND SUGAR FACTORIES

Why in news?

Regions like Marathwada have been facing acute water scarcity (the shortfall was as much as 40%). The rainfall in the region has been in deficit for second consecutive year leading to drought in the region.

Issue: Is sugarcane cultivation responsible for drought in Marathwada region?

Arguments in support

- Sugar cane is a water-guzzling crop (requires 2000 to 2500 mm of water). Unlike Northern regions, which has huge network of rivers, Maharashtra’s sugar cultivation is in regions with water scarcity.
- The 4% of land under sugarcane cultivation consumes as much as 71.5% of irrigated water.
- The region has over 20 sugar factories and each uses 1500 litre of water to crush per ton of cane.
- Earlier, Maharashtra Water and Irrigation Commission recommended stopping sugar cultivation.

Arguments against

- Sugarcane consumes less water on a per-day basis, and even less for every unit weight of biomass produced because unlike paddy, sugarcane grows for 365 days a year.
- Mills operate for all round the year and if fodder, electricity (from bagasse) and alcohol from sugar factories are considered, the mills don’t appear to consume any additional water or electricity.

Conclusion

- A careful balance between cultivation priorities and water allocation is required.
- Drip irrigation, which can save 40% of water, should be made mandatory and can be given legal force.
- As per Economic Survey 2015-16, less water intensive crops like Pulses and Coarse grain can be promoted.
- Any ban on sugar factories have to be based on proper evaluation of input cost and output value of sugar, power, ethanol & bagasse produced from them.

3.8. NEGATIVE RATES OF INTEREST IN MONETARY POLICY

Why is news?

In the recently held Spring Meeting of the IMF and the World Bank, concerns about excessive reliance on monetary policy and especially negative rate of interest were voiced.

What is the use of negative rates?

- To stimulate economic growth by increasing consumption.
- To increase inflation in cases of persistent deflation.
- Negative rates leads to depreciation of the currency, which increases exports (as investors switch to areas with better returns).

Negative implications of negative rates of interest

- Negative interest rates may directly harm the banking sector and their profitability.
- It may lead to futile currency war and competitive devaluation.
- May lead to liquidity trap situation, where monetary policy fails to deliver.
- On a long run, negative rates may lead to hoarding of cash and reduce the flow of funds in economy.
3.9. FDI FINANCING

- Apart from bringing new technology, enhancing productivity, job creation, and increasing consumer options, FDI brings in much needed foreign capital into a country.
- It also boosts exports and thus helps to bridge the current account deficit (CAD) of the country and maintain a positive balance of payment (BOP). This is called FDI financing of CAD.

Critique of FDI financing of current account deficit

- FDI may target domestic market instead of being export oriented, thus boosting domestic consumption and ultimately increasing imports.
- Once initial investment starts to turn profitable, it is inevitable that capital returns from the host country to the home country leading to worsening CAD.
- A similar trend is noticed in 2014-15, when despite increase in FDI inflows, CAD component has risen. (Refer graph)

3.10. MEASURING POVERTY: NITI AAYOG TASK FORCE

- Task force appointed by NITI Aayog under Arvind Pangariya has pitched for a low poverty line.
- He also proposed four options to arrive at a poverty line with due considerations from other stake holders. These four options are:
  ✓ To continue with the Tendulkar poverty line.
  ✓ Switch to the Rangarajan or other higher rural or urban poverty lines.
  ✓ Track progress overtime of the bottom 30% of the population.
  ✓ Track progress along specific components of poverty such as nutrition, housing, drinking water, sanitation, electricity and connectivity.
- NITI Aayog is favouring for the Tendulkar line which set poverty ratio to 21.9 % as compared to Rangarajan committee which had a higher poverty ratio of 29.5%.
- To remove any criticism that many poor would be left behind if poverty line as per Tendulkar committee is adopted, NITI Aayog has underlined that it will only be used to track progress in combating poverty rather than identifying the poor for entitlements.
- SECC data as suggested by Saxena and Hashim committee will be used for entitlements.

3.11. PANAMA PAPERS LEAK

Why in News

- More than 11 million documents from the secret files of Mossack Fonseca, a law firm headquartered in tax haven Panama, were leaked.
- Records reveal a list of individuals who have set up offshore entities in tax havens around the world.
- These offshore entities mask real ownership but still show compliance with lax tax regulatory system
Over 500 Indians figure on the firm’s list of offshore companies, foundations and trusts.

**Relevant Laws**

- As per RBI norms individuals are allowed to remit funds up to $250,000 a year under the Liberalized Remittance Scheme (LRS).
- But while RBI let individuals buy shares under LRS, it allowed them to set up companies abroad only after August 2013.
- Money cannot be sent to countries identified as “non-cooperative” by the global Financial Action Task Force (FATF).

**Way Forward**

- Undisclosed Foreign Income and Assets (Imposition of Tax) Act, 2015 should be strictly implemented.
- RBI should clearly define the legality in buying and setting up offshore entities.
- Tax regime in India needs to be simplified to reduce compliance cost.
- Cooperation at multilateral level like G20 to tighten capital flow norms and treaties to share tax information to avoid tax evasion.
- Agreement on Base Erosion and Profit Shifting (BEPS) among OECD countries should be adhered to check tax evasion.

### 3.12. DASHBOARDS TO MONITOR MAKE IN INDIA AND RANK STATES

- Dashboards developed by DIPP to monitor progress made on the two action plans:
  - Make in India Action Plan
  - ’State level Business Reform Action Plan.
- **Make in India Dashboard**:
  - Around 21 Ministries covering 22 Sectors identified to boost manufacturing and services as part of the 'Make in India' will view and update the progress of each of their action plans on the dashboard.
  - It will facilitate timely delivery of identified action points.
  - Facilitate monitoring and identification of delays in implementation, if any.
  - It will also allow PMO, Cabinet Secretariat and DIPP to monitor progress and suggest corrective course on the progress indicated.
- **Ease of Doing Business Dashboard**
  - It will facilitate States to report progress made by them on State Level Business Reforms Action Plan and validation of responses received from the States/UTs by DIPP.
  - It also has a feature to identify and disseminate information about the good practices followed by the States/UTs.
  - Real-time ranking of States/UTs once a response is validated by DIPP.
  - The response posted by the States, their progress and inter-se ranking will be visible to public too.

### 3.13. WORLD ECONOMIC FORUM REPORT ON SMART CITIES IN INDIA

- ‘Reforms to Accelerate the Development of India’s Smart Cities’, a report by the WEF and PwC was released.
- Report mentioned that there is still a need for reforms at various levels to successfully implement the Smart Cities programme.
- It has identified areas such as land acquisition, dispute resolution, permits, information availability and procurement processes that must be addressed.
- The report says that while the country’s urban population currently totals around 410 million people (32 percent of the total population), it is expected to reach 814 million (50 percent) by 2050.
Solutions as per the report

- **Single-window systems**: Easing the permitting process will accelerate project execution, reduce cost and time overrun, and improve intra- and inter-departmental collaboration.
- **Institutional reforms**: The report recommends better collaboration and a unified command structure across multiple planning and administrative bodies within a city.
- **Devolution of power** to local government to determine and collect user charges and taxes in order to make local bodies financially independent.

- **Sector-specific reforms**: In relation to the physical infrastructure sector, reforms are recommended to establish independent regulators and empower them where they already exist, ensure metering and enforce collections (of user charges and taxes) from large defaulters.
- **Private-sector support** will enable the rejuvenation of crippling and inadequate infrastructure and help address capacity issues across state governments and urban local bodies (ULBs).

### 3.14. FCRA TWEAKED TO BOOST CSR SPENDING

**What is the amendment?**

- The amendment effectively **redefines** Indian subsidiary of foreign companies as Indian companies, which was till now considered as “foreign source” under FCRA (Foreign contribution and Regulation Act).
- This has been given **retrospective effect and will come into effect from 2010** when FCRA was introduced.

**About CSR (Corporate Social Responsibility)**: Firms beyond a threshold of net worth, revenue or net profit have to spend 2% of their average profit of three years on social development as mandated by law.
• Until now, “foreign source” included any company with foreign investment of above 50%.

Background
• As per the existing regulations, funds of companies with more than 50% foreign shareholding are treated as foreign source, which requires them to partner with only those organizations that are registered with the ministry of home affairs (MHA) under FCRA norms.
• Even foundations run by such companies must obtain a licence under FCRA norms to operate.

Analysis
• Companies with more than 50% foreign shareholding will be able to make donations without ensuring that the non-profit organizations receiving the funds have FCRA clearance.
• It will benefit the smaller NGOs who can’t undergo the difficult process of registration with FCRA to receive funds.
• However, it also paves way for political parties to receive funds from foreign entities operating in India (like Vedanta). Political parties are hitherto, prevented from receiving funds from foreign sources.
• Already a case is pending against BJP and Congress in Supreme Court for receiving funds from foreign sources in violation of FCRA norms. Retrospective effect of the amendment may enable the parties to escape punishment.
4. SOCIAL ISSUES

4.1. REGISTRY OF SEX OFFENDERS

Government is planning to set up a sex offenders registry in the country on the lines of those in the US and UK.

Details of the Registry

- Details of the charge sheeted sexual offenders, even those below 18 years, will be included in the database which will be put up on the National Crimes Record Bureau website.
- It can be accessed through citizen’s portal on the upcoming Crime and Criminals Tracking Network and Systems Project (CCTNS).
- The government plans to publicize their photographs, address, PAN Card and Aadhar Card details, fingerprints and DNA samples.
- The draft guidelines say that extensive information of the offender like aliases, phone numbers, temporary lodging information, and travel and immigration documents will be provided.
- Details on their employment history, schooling, college, vehicle information, criminal history etc. will also be provided.
- The project also proposes to integrate with e-court and e-prison applications to improve efficiency of criminal justice system.

Benefits

- Will instill fear in the minds of repeat sexual offenders and public will be befitted from it.
- It will be very beneficial and handy for the law enforcement agencies also.

Criticism

- Studies on similar initiatives in US and UK shows that registries have virtually no effect on reducing crimes, destabilizes lives of convicted offenders, and contributes towards recidivism.
- Contributes towards the myth that most sexual offences are committed by strangers.

Way Ahead

- Government should try to provide cognitive therapies to sexual offenders to ensure they do not repeat offences.
- Government should work towards ensuring victims are able to access health and legal services without being re-traumatised in the process.

4.2. WOMEN ENTRY TO SHANI SHINGNAPUR TEMPLE: UPDATES

- The Bombay high court had directed Maharashtra government to take pro-active steps for ensuring compliance of law to prevent discrimination against women on entry to places of worship.
- High Court also observed that it is the fundamental right of a woman and the government should protect it.
- If men are allowed in a place of worship, then women should also be permitted as no law prevents them from doing so.
- HC also stated that any temple or person imposing restrictions can face a six-month jail term under a Maharashtra law
- **Under the Maharashtra Hindu Place of Worship (Entry Authorization) Act, 1956**, if any temple or person prohibits any person from entering a temple then he or she faces a six-month imprisonment.

(Note: For more details on this issue, please refer Feb 2016 Vision Current Affairs.)
4.3. FAMILY LAW REFORMS

- Recently government-appointed high-level panel gave suggestions related to family reforms
- Panel was formed for the review of women and family laws with respect to marriage, divorce, custody, inheritance and succession.

Suggestions by the Panel

- **Amending the IPC on adultery (Section 497)** - Currently it can be only used by the husband against the person who has sexual relations with his wife.
- Removing the gender discrimination inherent in laws that stipulate a lower legal age of marriage for a girl.
- Ban on triple talaq and polygamy.
- Right to maintenance for Muslim women in their personal law as well as for women in live-in relationships and unmarried dependent daughters.
- Introducing a separate legislation for dealing with “honour killings”.
- Amendment of Special Marriages Act – 30 day public notices under the Act should be done away to protect couple marrying against the wishes of their parents.
- The term ‘cruelty’ also needs to be re-defined since personal laws recognize cruelty as a ground for divorce.

Why is reform required

- To implement Uniform Civil Code in India as envisioned in Article of 44 of constitution.
- To remove the implicit gender biases in the personal laws of various religions.
- To create peaceful conditions for people to marry according to their choice and prevent them from societal pressure like from Khaps.
- Will help in improving the condition of women and their empowerment in patriarchal society of India.

4.4. NAVY GRANTS PERMANENT COMMISSION FOR WOMEN

- Recently the Indian Navy granted permanent cadres to seven women officers and plans to introduce Permanent Commission in eight branches from 2017.
- It is subject to medical fitness and good Annual Confidential Report.
- From 2017, branches opened for women will include education, law, meteorology, air traffic control, logistics, observers, pilots on maritime reconnaissance aircraft and naval constructors.

Background

- Women until now were only allowed Permanent Commission in select streams of the Army and Air Force.
- Navy until now permitted only Short Service Commission for 14 years, which means they were denied pension.
- The Indian Air Force last year announced induction of women in the fighter stream, being the first Indian armed force to allow women in the combat role. This however is only on an experimental basis.

4.5. AGEING INDIA

Why in news?

- The Ministry of Statistics recently released a report called “Elderly In India 2016”

Highlights of the Report

- The number of Indians above the age of 60 increased 35 percent from 2001 to 2011.
- The state with the maximum percentage of elderly is Kerala with 12.6% of the population. Other states with high ageing population are Goa, Tamil Nadu, Punjab and Himachal.
- 71 percent elderly reside in villages while 29 percent reside in cities.
The state with the lowest percentage of elderly is Arunachal Pradesh where only 4.6 percent of the population is above sixty.

India’s age dependency ratio is also increasing from 10.9% in 2001 to 14.2% in 2011.

The proportion of literates among elderly increased from 27% in 1991 to 47% in 2011.

Challenges

- Ageing society puts higher burden on the government in terms of higher spending on healthcare and pensions.
- While they are dependent on social welfare they do not contribute actively to the revenue.
- Due to breakdown of joint family system, pressure on govt. to care for elderly increases.
- Being extremely vulnerable they are more prone to crimes.

**4.6. DIABETES**

**Why in News?**

This year the theme of the World Health Day observed on April 7th was “Beat Diabetes”.

**Why Diabetes?**

- WHO report and Lancet study shows fourfold increase in diabetes cases from 1980 to 2014 and half of them live in India, China, Brazil, Indonesia and USA.
- In India cases increased from 11.9 million in 1980 to 64.5 million in 2014.
- By 2030, India is expected to be the diabetes capital of the world.

**Background**

- Diabetes is a non-communicable disease associated with high blood sugar levels either due to inadequate insulin production or body not responding to insulin or both.
- **Types:** Type 1: little or no insulin production; Type 2: body shows insulin resistance; Gestational: associated with females during pregnancy; and pre-Diabetes: blood sugar not high to be Type 2
- **Causes:** Rapid urbanization, sedentary lifestyle and unhealthy diet. Obesity is chief risk factor.
- **Symptoms:** common are increased urination, thirst and hunger.
- **Effects:** Can lead to complications like blindness, kidney failure or loss of limbs, risk of heart attack, pregnancy complications etc.

**Challenges**

- Major burden on economy and people’s pockets in India
- A chief cause of disability among adults in India.
- Screening delays, lack of information and lack of well-trained human resources.

**Way Ahead**

- Change in dietary pattern required with more fiber and protein and less of sugar and starch.
- Increase taxes on sugary drinks.
- Early detection and effective treatment must be routinely available in primary healthcare centers
- Urban planning should support safe and pleasurable physical activity.
- Public education on prevention and treatment of diabetes should be provided.

**4.7. GLOBAL REPORT ON URBAN HEALTH**

**Why in News?**

“Global Report on Urban Health: Equitable, Healthier cities for Sustainable Development” was recently released by the WHO and the UN Human Settlement Programme (UN-Habitat).
Findings of the Report

- It provides evidence that in cities, progress in health depends not only on the strength of health systems, but also on shaping healthier urban environments.
- Non-communicable diseases (NCDs) present not only a threat to human health but also have significant economic implications.
- Non-communicable diseases such as cardiovascular, diabetes and cancer can cost Indian economy 6.2 trillion during 2012-2030 period.
- Increasing urbanization and the associated lifestyle can fuel the increase of NCDs in cities.
- Inadequate planning for urbanization is creating a social and environmental unsustainability.
- In India and China, cardiovascular and mental health diseases present the greatest economic threats followed by diabetes and cancer.

4.8. POOR HEALTH COVER: HEALTH IN INDIA REPORT BY NSSO

In News

- National Sample Survey Office released a report titled ‘Health in India’
- This report draws data from the 71st round of the NSS conducted from January to June 2014.

Findings of the Report

- Over 80 per cent of India’s population is not covered under any health insurance scheme
- Poor Performance of RSBY – Only 12% of urban and 13% of rural population had access to insurance cover.
- Medicines contributes hugely to out of pocket expenditure – Out of all health expenditure, 72% in rural and 68% in urban areas was for buying medicines for non-hospitalised treatment.
- Private Doctors are the most significant source of treatment - 72 per cent of the treatment provided in rural areas and 79 per cent in urban areas was availed in the private sector.
- Higher Expenditure incurred by people in private sector hospitals – On an average rural population spent Rs.5,636 for hospitalised treatment in a public sector hospital and Rs.21,726 at a private sector hospital.

Reason for poor health coverage

- Financial constraint - Biggest hurdle in both rural and urban areas.
- Non-availability of health facilities - This is a big factor in rural areas due to lower density of private hospitals and poor conditions of govt. hospitals.
- Rising cost of medicines and cuts in budgetary allocation to government hospitals has led higher expenditure on medicines.
- The government’s allocation to healthcare as a percentage of GDP has fallen to 1.05% in 2015-16 from 1.47% in 1986-87.
- Poor financial inclusion and financial literacy has led to low coverage of insurance.

Way Forward

- Free medicines and diagnostics should be provided through public health facilities
- Awareness creation and distribution of health insurance through Banking Correspondents model.
4.9. MEDICAL OVERUSE CRISIS IN INDIA

In the past few decades health care experts, medical journals and the WHO has been warning India about its “medical overuse crisis”

Causes of Medical Overuse in India
- Increasing insurance cover
- Mushrooming of private hospitals
- Misuse of the financial provisions of government health welfare schemes

Implications of the Crisis
- A Media Report shows that between 2009 and 2015, number of surgeries conducted under the National Health Mission has shot up remarkably.
- C-Section, hysterectomies and other emergency surgeries have increased manifold.
- In 2014 the World Bank warned that India’s excessive healthcare situation could harm patients whilst providing marginal benefits.
- The Rashtriya Swasthya Bima Yojana, which offers BPL families yearly cashless insurance of Rs 30000, is one of the schemes that is misused by doctors.
- In Chhattisgarh ‘uterus scam’ in which young women were subject to unnecessary hysterectomies attracted international media glare.
- The side effects of hysterectomies include several health complication including risk of heart disease.
- While WHO says C-Sections should be performed as life saving measure and that no region should have a rate higher that 10-15 percent but national average for India was 20 percent.
- While poor in India have access to complex surgeries but not to basic primary health care.

Solutions
- Vacancies in Primary Health Centres should be filled immediately to reduce dependence on tertiary care services and specialists.
- Strict technical audit of the medical procedures followed under the government health welfare schemes.
- Greater regulation of the primary health services, private health and medical insurance schemes.
- Ensuring awareness that more medicines and tests do not necessarily mean superior treatment and healthcare.
- Strengthening public health services which will keep a check on malpractices in private healthcare.

4.10. FOREST RIGHTS ACT IMPLEMENTATION ISSUES

Why in News?
- Reports of alleged violation of the Forest Rights Act by the Odisha Mining Corporation in tribal areas of Odisha have brought the Act under the spotlight.

What is the Forest Right Act?
- Schedule Tribes and Other Forest Dwellers Act or Recognition of Forest Rights Act came into force in 2006. The Nodal Ministry for the Act is Ministry of Tribal Affairs.
- The Acts seeks to recognize the rights and occupation of traditional forest dwellers and Schedule Tribes in such forests.
- It provides for diversion of forest land only with the recommendation of the gram sabhas.
- Also includes right of self-cultivation for livelihood, rights over minor forest produce, community rights such as nistar etc.
Challenges in Implementation of FRA

- Consent Resolutions passed by Gram Sabhas is getting forged by interested parties for land diversion.
- In certain areas Forest Right Act is not being recognized.
- The concerned ministries look at the FRA as a hurdle to development, which needs to be circumvented rather than ensure its effective implementation.
- The knowledge base of tribal and forest dwelling communities is not being valued in decision-making.
- Lack of awareness and education among the tribals and forest dwellers.
- FRA is often in conflict with other laws eg. Rights in protected areas like wildlife sanctuaries, national parks etc.
- Saxena Committee pointed out several problems in the implementation of FRA. Wrongful rejections of claims happen due to lack of proper enquiries made by the officials.

4.11. RULES FOR AMENDED SC/ST ACT

Why in News?


Background

- The objective of the amendment was to speed up process of dispensation of justice to SC/ST.
- And to liberalize and expedite access to relief for victims of atrocities, ensuring special sensitivity in cases of offenses against women.

Important Provisions

- Amended provision increases relief package from 75000 to 7,50,000 and 85000 to 8,50,000 depending on the nature of offence.
- Also provides for admissible relief to SC/ST women for offences of grievous nature, on conclusion of trial, even though they may not have ended in conviction.
- Regular reviews of the scheme in assessing justice at the state, district and sub-divisional level committees in their meetings.
- Completing investigation and filing a charge sheet within sixty days.
- Provision of relief within seven days to victims, their family members and dependents.
- Also for the first time provision of relief for rape and gang rape.
- No medical examination will be needed to seek relief for non-invasive offenses such as sexual harassment, gestures or acts intended to insult the modesty of women.
- Adds newer offences to the list of atrocities including denying access to irrigation facilities, forest rights etc.

4.12. ALLOWING FOREIGN UNIVERSITIES IN INDIA

Why in news?

NITI Aayog recently submitted a report to the PMO and MHRD in favour of foreign universities setting up campuses in India.

Highlights of the Report

- It has suggested three routes for the entry of foreign education providers in India:
  - A new law to regulate the operation of such universities in the country
  - An amendment to the UGC Act of 1956 and deemed university regulations to let them in as deemed universities
  - Tweaking UGC and AICTE regulations to permit joint ventures between Indian and foreign institutions.
India stands to gain immensely by foreign institutions in India in terms of human and financial resources, teaching methodology and research and innovation.

It will help meet the demand for higher education in India, increase competition and subsequently improve standards of higher education in India.

To the argument that it will increase the cost of education in India rendering it out of reach for large parts of the population, the report says that financial assistance should be made available to deserving students on the basis of merit cum means.

4.13. LIQUOR BAN IN BIHAR

Why in News

- On April 6th, Bihar government announced a prohibition law on liquor.
- It bans the sale and consumption of country liquor and foreign made liquor in the state with immediate effect.
- Government also intends to take responsibility of de-addiction of alcoholics as part of which has set up 39 de-addiction centres across the state.

Significance

- Obvious health benefits from reduction in alcoholism.
- Reduction in domestic violence where women and children are victims of violence.
- Could lead to reduction in crimes and crime rate in general.
- Productivity of labor could increase.

Challenges

- Immense power in the hands of police and other officials could be misused.
- Difficulty in implementation of the ban.
- Could lead to smuggling and increase in illicit trade.
- Revenue loss, estimated 4000 crore, could put significant burden on the ailing state.
- Liquor transport from neighboring states could also be a challenge.
- Displacement of people making their livelihood through liquor trade. However, govt. has announced Sudha dairy parlours for affected.
5. SCIENCE AND TECHNOLOGY

5.1. ISSUE OF PATENTS AND INDIAN GENERIC MEDICINE

Background

- USA and European Union have time and again raised issues over Indian Patent Laws.
- 2 provision have been sighted as problematic by western drug manufacturers -
  - Section 3(D) of the Indian Patents Act, which checks “ever greening” of Patents on frivolous grounds.
  - Compulsory Licensing (CL): allowing someone else to produce the patented product or process without the consent of the patent owner.
- SC of India has ruled against ever-greening of a drug- Glivec by Novartis and India has also issued CL for cancer drug Nexavar to issue generic medicines.
- So, the Office of United States Trade Representative has put India into “Priority Watch list” (PWL) in its Annual Special 301 report.

What do WTO rules say?

- Indian patent laws are compliant with TRIPS (Trade Related Aspects of Intellectual Property Rights).
- It allows flexibilities to governments to issue compulsory licensing in case the original manufacturer reverts to anti-competition policy or in the interest of public health.

Current Issue

- India is in the process of formulating its maiden IPR policy and it is alleged that U.S. industry lobby groups such as the U.S.-India Business Council (USIBC) and U.S. Chamber of Commerce received verbal, private assurances from Indian officials that India will not use ‘compulsory licensing’.
- USIBC also revealed that it had conducted “trainings” for India’s patent examiners which might affect independence of patent examination system.

Concerns for India

- Affects India’s status of “pharmacy of the world”
- Threaten people’s accessibility to medicines.
- Affect India’s fight against Drug Resistant TB, HIV, Cancer etc.
- Erode our Soft power especially with African countries for which India is the source of low cost generic lifesaving medicines.

Way out

- Resist pressure from the lobbyist group and ensuring that new IPR Policy is TRIPS compliant.
- Utilize flexibilities in international rules to cater to health needs of least developed and developing countries.
- To take like-minded countries on board on international forums over the issue.

5.2. UNIFIED PAYMENT SYSTEM

What is UPI?

It is a mobile interface which will use a virtual ID to transfer funds instantaneously across various banks with transaction limit of 1 lakh.

Significance

- It is expected to make e-commerce transactions easier.
- It will also facilitate micropayments and person-to-person payments.
- It will allow customers to instantaneously transfer funds across different banks.
With the help of UPI transactions will occur without sharing sensitive information like account number as virtual ID will be used for transactions.

Payments have been one of the biggest hurdles for mass adoption of online shopping in India. UPI has the potential of transforming the entire payments ecosystem in the country. 

**Current Status**: 19 banks have partnered with NPCI, an umbrella organization for all retail payments systems, to offer services based on UPI.

### 5.3. SRSAM (SHORT RANGE SURFACE-TO-AIR) MISSILE SYSTEM

- Defence Research and Development Organisation (DRDO) and French firm MBDA will jointly develop and build SRSAM systems in India.
- It will replace ageing Israeli Barack-1 air defence systems and Russian weapon systems. 
- However the project is still waiting for government’s final approval.

**About SRSAM**
- SRSAM is a Mach 3-class missile, weighing around 100 kilograms.
- It has a range of 40 kilometers & can be launched vertically to provide 360-degree defense coverage.
- Unlike Akash (medium-range-surface-to-air) missile, the new missiles will be a cannister based and vertically-launched system suitable for naval ships.
- Can be placed hidden in the ship's dock and escape enemy surveillance radars.
- Can be used by the Army and Air Force too.

### 5.4. K-4 MISSILE – INTERMEDIATE-RANGE SUBMARINE- LAUNCHED BALLISTIC MISSILE (SLBM)

**Features**
- It is nuclear capable missile.
- It is under development by Defence Research and Development Organisation (DRDO) of India.
- It will arm the Arihant-class submarines.
- It can carry a warhead weighing up to 2.2 tons.

**Why in news**: The DRDO has test-fired the nuclear capable K-4 missile from the indigenous nuclear-powered submarine, INS Arihant.

The K-4 was developed to overcome the difficulty of fitting in AGNI-III in equipping INS Arihant.

### 5.5. SYNTHETIC ORGANISM

**What is Synthetic biology and Synthetic Organisms?**

Synthetic biology is the design and construction of new biological entities such as enzymes, genetic circuits and cells or redesign of existing biological systems. New organisms hence conceived are called Synthetic Organisms.

**Recent research**
- Scientists created synthetic organisms with **fewest genes** needed to survive and multiply.
- New organism contains only 473 genes.

**Practical Applications**
- Provide hints about origin of life forms on earth.
- Enable researches in developing new medicines, biochemical, biofuels, and in agriculture.
• Design and build synthetic organisms where specific functions can be added on demand.

Ethical issues regarding Synthetic Biology
• Threat to public health, environmental contamination.
• Possible misuse by creating deadly biological weapons.
• May lead to concept of “Designer babies”.
• Issues related to equal access to technology, benefit sharing etc.

One way synthetic biologists make cells
Synthetic biologists are trying several strategies to design and build communities of one-celled organisms. This is a simplified description of one approach.

1. Type into a computer program the sequence of letters that code the desired gene. (Genetic material is an intricate strand of four chemicals, each represented by a letter.)
2. Hit “print.” A machine like an ink-jet printer spits out the chemicals, in the right order.
3. Assemble these chemicals into a strand of artificial DNA, constructing a gene. Genes are the operating instructions for life.
4. Implant the genetic material into an empty cell, and watch it “boot up,” becoming a man-made cell.
5. Watch it reproduce, creating future generations carrying the man-made genetic material.

5.6. INDIA’S LARGEST OPTICAL TELESCOPE

• The telescope is the product of an Indo-Belgian collaborative effort, assisted by the Russian Academy of Sciences that was started in 2007.
• ARIES telescope has been built with collaboration with Belgian company, AMOS assisted by Russian Academy of Science.
• It would be Asia’s largest ground based Optical Telescope.
• It uses a mirror of diameter 3.6 m.
• It is located at a height of 2500m at a site suitable to get a clear view of sky.
• It will be used to study star structures and magnetic field structures of stars.

5.7. OCEAN STATE FORECAST SERVICES

Indian National Centre for Ocean Information Services (INCOIS) of the Ministry of Earth Sciences was recently presented with the National Geoscience Award for developing the Ocean Forecast and Information System.

About Ocean State Forecast Services
• It provides information on the following parameters:
  ✓ Height, direction and period (of both wind waves and swell waves).
  ✓ Sea surface currents.
  ✓ Sea surface temperature.
  ✓ Mixed Layer Depth (the well mixed upper layer of the sea).
  ✓ Depth of the 20 degree isotherm (measure of the depth of the thermocline).
  ✓ Astronomical tides.
  ✓ Wind speed and direction.
  ✓ Oil-spill trajectory.
• Forecast is available accurately based on a real time data for Indian Ocean & also separately for the following regions: Arabian Sea, Bay of Bengal, Northern Indian Ocean, Southern Indian Ocean, Red Sea, Persian Gulf and South China Sea.
The forecast services have also been extended to Maldives, Sri Lanka and Seychelles in collaboration with the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia.

Uses

- The users can take appropriate informed decisions based on the forecast sea state conditions, saving life and property.
- Help traditional fishermen & those operating in high seas.
- Help high tech oil exploration for executing operations on seas.
- Help port activities like entry and exit of vessels.
- Boost recreational tourism at the sea side, including the operations of sea planes
- Better management during contingencies like search and rescue operations, oil spills, cyclones etc.

5.8. IRNSS IS NOW NAVIC(NAVIGATION WITH INDIAN CONSTELLATION)

- With the successful launch of IRNSS 1G, India has successfully put into all the seven navigation satellites into orbit. This positioning system of India is called NAVIC.
- Launched by PSLV-C33 rocket from Sriharikota.
- Life span is 12 years.
- Accuracy better than GPS.
- This will provide position information service to users across the country and the region, extending up to an area of 1,500 km.
- The NAVIC will provide two types of services - standard positioning service and restricted service.

Note: Covered in March current affairs notes in detail

5.9. XENOTRANSPLANTS

Why in news?

- A pig's heart has been kept healthy and beating inside a baboon's abdomen for over two years, setting a new world record, and suggesting that cross-species transplants are closer than ever.
- Scientists say that the research can be extended to human's heart as the Pig heart is most similar to human heart.
- Xenotransplantation is when living cells, tissues or organs are transplanted between species.

Uses of xenotransplantation

- Organ transplants – replacing diseased organs, such as hearts, lungs, livers, pancreases and kidneys.
- Cell transplants – replacing damaged or destroyed cells in diseases such as diabetes, Alzheimer's and Parkinson's disease.
- Tissue transplants – skin grafts, cornea transplants or bone transplants.
- Bridging transplants – providing organ function externally to patients with organ failure.

Challenges

- Even if experiment works for humans, transplant recipients would need to stay on immunosuppressants for the rest of their life.
- Risk of infectious disease spreading from animals to humans

5.10. QUANTUM SPIN LIQUID

- Scientists have discovered a new state of matter called “Quantum Spin Liquid” which causes electrons to break down into smaller quasiparticles.
- It was predicted 40 years ago but its existence is proved recently.
What is quantum spin liquid?

- The ‘spin’ doesn’t actually mean that anything is physically spinning in the matter, but instead describes a type of intrinsic angular momentum in quantum mechanics.
- “Liquid” isn’t in the traditional sense but refers to the fact that the quantum spins of the electrons in the material suddenly start interacting to create a disordered state (much in the way liquid water is in a disordered state compared to crystalline ice).
- It can be used in quantum computers - which would be exponentially faster than regular computers.

5.11. BEAM (BIGELOW EXPANDABLE ACTIVITY MODULE)

- It is carried along with the cargo component of SpaceX’s Dragon capsule, which was sent to International Space Station to deliver supplies and inflatable habitat to its crewmembers.
- BEAM will allow investigators to gauge how well the module protects against Solar radiation, space debris, contamination, etc.
- Thus paving way for future larger expandable habitats.

5.12. NEW ECO-FRIENDLY TECHNOLOGY FOR WATER PURIFICATION

- Indian scientists at Institute of Advance Study in Science & Technology (IASST) in Assam’s Guwahati have developed an eco-friendly nanotechnology for water-softening applications that could be used in civic water treatment plants for generating potable water.

How it works?

- The team made a biopolymer using a naturally occurring substance, called chitosan (obtained from the hard outer skeleton of shellfish, including crab, lobster, and shrimp).
- On this polymer Nano particles are attached.
- In the biopolymer, nanoparticles are the functional parts of the technology. They remove calcium and magnesium components of water through ion exchange, the same process that is used by common water purifiers.
- This material is the first of its kind with potential to act as a biodegradable and green material for water-softening applications.
- While convention water-softening techniques use synthetic resins, this novel technology is biodegradable as well.

5.13. GRAPHENE TO BOOST SOLAR ENERGY TECHNOLOGY

- According to recent research, Graphene-coated solar panels can produce electricity from rain drops. This will increase efficiency of solar panels.
- Rain water contains salts which in turn contains positive and negative ions. These positive and negative ions are used to generate electricity.
- **Properties of Graphene**
  - Stronger than the steel.
  - Good conductor of heat and electricity.
- **Applications**: Paints and coatings, lubricants, oils and functional fluids, capacitors and batteries, thermal management applications, display materials and packaging, solar cells, inks and 3D-printers’ materials and films.
- **Structure**: Honey-Comb lattice of carbon atoms.

5.14. PETRIFICATION

- Petrification is the process by which organic material is converted into a fossil through the replacement of the original material and the filling of the original pore spaces with minerals.
- It requires a minimum of about 10,000 years to take place.
- **Why in news**: A 20-million-year-old fossilized tree, discovered in Himachal Pradesh.
6. INTERNAL SECURITY/LAW AND ORDER

6.1. COMPREHENSIVE INTEGRATED BORDER MANAGEMENT SYSTEM (CIBMS)

The government has given its nod to the ‘Comprehensive Integrated Border Management System’ (CIBMS) for 24x7x365 surveillance of the border (western border with Pakistan) through technology.

Objective of CIBMS
To avoid further terror attacks like Pathankot, infiltration and smuggling.

Details of CIBMS
- It is a five-layer elaborate plan to completely stop infiltration on the 2,900-km western border with Pakistan. Five layers include:
  - CCTV cameras.
  - Thermal image and night-vision devices.
  - Battlefield surveillance radar.
  - Underground monitoring sensors.
  - Laser barriers.
- The integrated set-up will ensure that if one device doesn't work, another will alert the control room in case of a transgression.
- Laser barriers will cover 130 unfenced sections including riverine and mountain terrain from Jammu & Kashmir to Gujarat - often used by the infiltrators.
- The entire border will be covered with high tech systems in two years.

6.2. ANTI-TERROR CYBER-PUSH

Union government will come up with a “National Social Media Policy” to counter the cyber-threat.

Focus of the policy: on countering social media propaganda following communal incidents.

Reasons for policy
- Radicalization of Youth: increasing number of young people are being radicalised by the Islamic State (IS) through online videos and social media groups.
- Communal violence: social media platform is being used to create social/communal violence.
- Morphed images are being circulated in social media.
- 48 Indians have been arrested in the past 2 years for IS links and 25 have travelled to Syria to fight alongside IS.

6.3. ORGANIZED CRIME: TRANS-NATIONAL HUMAN TRAFFICKING

The world over, human trafficking is labelled as the third most lucrative illicit trade, after drugs and arms. The United Nations (UN) has designated July 30 as World Day against Trafficking in Persons.
Human trafficking over Indo-Bangladesh border

West Bengal shares approximately 2,220 km of land and 259 km of riverine border with Bangladesh, most of which is unfenced, making cross-border trafficking in persons, drugs, and FICN seamless.

- West Bengal also acts as a transit point for human trafficking.
- West Bengal is the hub of internal and cross-border human trafficking in India.

Defining trafficking

- The 2003 UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, supplementing the UN Convention against Transnational Organised Crime, defines trafficking in persons. It includes sex trafficking and forced labour. India is signatory of convention.
- Article 23 of the Indian Constitution prohibits human trafficking; it does not define the term.
- The Criminal Law (Amendment) Act of 2013, which substituted Section 370 of the Indian Penal Code deals with trafficking of persons for exploitation. However, this does not include forced labour. Nor does the Immoral Traffic (Prevention) Act of 1956 (as amended in 1986).

Issues with present law

- The critical issue concerning cross-national victims is that while perpetrator or trafficker (Indian or foreign) may receive modest punishment, trafficked persons are victimised twice.
- If victim and trafficker are arrested in India, they are both charged under Foreigners Act, 1946.
  - According to the Act, if an offender is a foreigner, he/she should be punished under this Act and deported. As a result, the trafficked person is treated as a criminal for his/her unlawful presence in India.
  - While the perpetrator, if a foreigner, is deported following completion of the sentence, the victim is transferred to a shelter home in India and is required, as per court orders, to remain there till the court hearing, since he/she is the witness in the case.
- Not comprehensive law
  - Indian laws do not target traffickers and their associates or penalise them adequately.
  - The penal clauses are not used adequately to bring the clients to justice.
- Lack of awareness of provision:
  - The trafficker can be charged under Section 366B of the IPC which states that importation of a female below the age of 21 years is a punishable offence.
  - However, this provision is rarely implemented due to unawareness of police.
- Delay in the verification of the addresses of victims
  - May take as long as two or three years.
  - The reasons for this include delay in confirmation by the Bangladesh government.
  - Incorrect, incomplete, or vague address given by the trafficked persons at shelter home.

Way forward

- Seamless coordination among various law enforcement agencies and NGOs from both side of the border.
- Community mobilization and sensitization of the BSF on the issue of cross-border trafficking
- Transit homes run by NGOs in collaboration with BSF along the border can be set up.
- Once the trafficker and victim are apprehended by the BSF, victim can be sent to a transit home rather than police station till her antecedents are verified by Bangladesh government.
- The question of human trafficking needs to be addressed from a social and economic angle. Offering allurements to the poor in the name of employment is a common trap.
- The victims of trafficking, especially children, need safe social and economic rehabilitation.
- Human trafficking results in and fuels all forms of slavery such as sexual exploitation, forced labour, other forms of labour exploitation, forced marriages, and the abuse of children in armed conflicts.
6.4. INDIA OPTS NOT TO JOIN GLOBAL TERROR DATABASE

- The government has decided not to join a U.S. maintained global terror database in the face of objections from the intelligence agencies.
- The proposal has been stuck since it was initially proposed by the U.S. in 2012.
- Indian security agencies are apprehensive of giving unhindered access to the U.S. on sensitive data related to terrorists.

The Homeland Security Presidential Directive (HSPD-6)

- The HSPD-6 is an agreement for exchange of terrorist screening information between the Terrorist Screening Centre (TSC) of the U.S. and a selected Indian security agency.
- The TSC has the database of 11,000 terror suspects. The database includes name of the terror suspect, nationality, date of birth, photos, fingerprint (if any), and passport number.
- The U.S. has already finalised such agreements with 30 countries.

6.5. WORLD MILITARY EXPENDITURE

Following are the major findings of the Stockholm International Peace Research Institute (SIPRI) report on world military expenditure in 2015.

- India is the sixth largest military spender in 2015 having spent $51.3 billion.
- India remains the biggest buyer of arms in the world. The main supplier of arms to India in 2009-13 was Russia, accounting for 75 per cent of all imports.
- World military expenditure rose by 1 per cent in 2015.
- The U.S. remained by far the world’s largest spender followed by China, Saudi Arabia, Russia and U.K.

6.6. INDIA’S FIRST MARITIME SUMMIT

Maritime India Summit 2016 (MIS 2016) is a maiden flagship initiative of Ministry of Shipping, Government of India.

Objective
To attract potential investors to the vast opportunities of the Maritime Sector.

Key facts
- Delegates from around forty countries participated.
- South Korea was the partner country for the event.
- India and South Korea also signed a memorandum of understanding for cooperation and mutual assistance in the port sector.
- The Union government released a national perspective plan for the Sagarmala Project at the summit, setting sight on boosting India’s merchandise exports $110 billion by 2025, and creating 40 lakh direct jobs and indirect employment for 60 lakh people.
- Investment commitments of over $13 Billion in 140 projects were made during the summit.

Significance of Summit
- It is estimated that investment opportunity of close to Rs.1.14 lakh in inland waterways development and Rs. 3 lakh crore in port-led development under the flagship Sagarmala project exists in India.
- Government also highlighted its initiative for investors in maritime sector.
  - It has allowed 100 per cent FDI in ports.
  - 10-year tax holiday has been extended to enterprises engaged in developing, maintaining, and operating ports, inland waterways, and inland ports.
The ambitious *Sagarmala programme* intends to promote port-led development. It will involve more than 150 projects related to:
- Modernisation of existing ports,
- Setting up 5-6 new ports,
- Port connectivity through heavy haul rail corridor,
- Inland waterways,
- Freight-friendly expressways,
- Coastal Special Economic Zones and industrial clusters.

**Importance of maritime sector**

- **Economic dimension**
  - India has 7500 km of long coastline.
  - India’s marine export-import trade has been growing at a rate of 4.5 per cent y-o-y (5-year volume CAGR) and accounts for *95 per cent of total EXIM trade volume for India*.
  - The development of a robust maritime sector is *pivotal to economic development* in countries with long coastal boundaries.
  - Apart from having a multiplier effect on the economy, the maritime sector itself has the potential to significantly contribute to GDP.
  - The biggest benefit from robust shipping sector will be *massive cost-saving*: cost for coastal shipping is Rs. 0.15-0.2 per tonne/km compared to 1.5 for railways and 2.5 for road.

- **Strategic dimension**
  - The Indian Navy played a pivotal role in containing piracy on the high seas and is positioning itself as the "net security provider" in the broader Indian Ocean region with capacity building, joint exercises and increased multilateral exchanges.
  - India has developed strong relation with Indian Ocean littorals to check the expansion of Chinese in Indian Ocean region.
  - India has begun to collaborate with neighbouring Bangladesh and Myanmar in building waterways and port infrastructure.

**Conclusion**

- The maritime sector has a vital role to play in India’s growth story.
- India has for long been slow, and ad hoc, in developing infrastructure to reap the economic opportunity its seabords naturally provide.
- A three-pronged plan consisting of a *workable policy, fiscal incentives and infrastructure* would ensure development of India’s coastal shipping sector and strong growth.
- The new emphasis in maritime sector is two-sided — *securing energy and trade routes to sustain economic growth* and keeping a check on increasing forays by other countries into India’s backyard.

**6.7. NOMADIC ELEPHANT- 2016**

- It seeks to promote military associations between India and Mongolia. The first joint exercise was held in 2004 and since then it is annually held.
- The aim of this exercise is to develop *synergy and inter-operability* between the two armies to fight in Counter Insurgency and Counter Terrorism environment under the United Nation mandate.

**6.8. EXERCISE SHATRUJEET**

Mathura-based Strike 1 corps conducted a major exercise 'Shatrujeet' in the deserts of Rajasthan.

**Objective**

To evaluate the capability of Army to strike deep into enemy territory in an integrated air-land battle environment.
• The operation-oriented exercise is focusing on "validating integrated battle theatre fighting concept" incorporating new-age technologies, weapon platforms and systems as well as long range precision targeting vectors.
• The focus of the exercise is to achieve joint and seamless coordination among all the forces in a nuclear biological chemical warfare scenario.

6.9. NAVAL DETACHMENT SET UP AT LAKSHADWEEP

To enhance surveillance of crucial shipping lanes, the Navy established a new naval detachment at Androth islands of Lakshadweep.

• Lakshadweep and Minicoy Islands occupy a strategic location in the Arabian Sea. A number of shipping lanes pass close to these islands.
• Setting up of a Naval Detachment at Androth Island will enhance the Navy’s reach and surveillance, and contribute significantly to strengthen maritime security and stability.
• A number of infrastructure facilities at naval units located on Kavaratti, Minicoy, Agatti and Androth islands are also being progressively upgraded.
7. ECOLOGY AND ENVIRONMENT

7.1. DROUGHT PREVENTION AND MANAGEMENT

Why in news?
- Against backdrop of acute water crisis in states, SC ordered centre not to turn “blind eye” to the situation.
- In a PIL hearing, SC ordered the centre to ensure that Food Security Act is implemented across states.
- It also ordered the centre to release pending funds under the MNREGS, to be released by first week of April.

Ground situation
- The country has been suffering an extended period of El Niño, which adversely affects rains and overall productivity.
- The problem is aggravated by declining commodity prices leading to poor income of farmers.
- However, Centre is still lagging in relief measure:
  - In 2014-15, govt. owed close to Rs 12000 crore as pending liabilities in MNREGS
  - First Installment under MNREGS has not been released.
  - Wages paid by the govt. under MNREGS is lower wages than statutory minimum wages.
  - Food Security act is still not implemented across states.

Drought Prevention Methods
- Increase investment in irrigation especially micro irrigation practices like drip irrigation. Pradhan Mantri Krishi Sinchayi Yojna would help in this.
- Improving the cropping pattern. E.g. one of the reasons for drought in Maharashtra is large-scale sugarcane farming which is a highly water intensive crop. Agro-climatic cropping pattern must be promoted by methods like MSP support.
- Also Water intensive crops like sugarcane should be replaced by drought resistant variety crops and crops like pulses in water scarce areas like Marathwada.
- The power and irrigation subsidy must be rationalized to reduce water wastage.
- Promoting conservation of water via rainwater harvesting techniques etc.
- MNREGA needs to be used for watershed management.
- Drought resistant crop varieties.

Drought Management
- Effective drought management has three important components:
  - drought intensity assessment and monitoring; need early forecasting so that an informed choice regarding crop varieties to be sown, planning the area to be sown and allocation of water resources can be done.
  - drought declaration and prioritization of areas for drought management; and
  - development and implementation of drought management strategies
- Several interventions with respect to agriculture are also required:
  - Contingency plan in case of late monsoon
  - Arranging availability of seeds for immediate distribution
  - Creating awareness among the farmers on management practices like intercropping, mulching, weed control, intercultural operations
  - Encouragement of afforestation
  - Ensuring availability of quality fodder and cattle camps
- In order to prevent starvation in drought situation recourse can be taken to intensify the permanent income support measures. For example expanding employment under MGNREGS, providing special food rations under the PDS, and arranging for improved school meals.

- Droughts are not attributed to only scarcity of rainfall but more to inefficient management of water resources.
- For example, due to overexploitation of ground water without proper harvesting methods, limited recharge is taking place.
National Disaster Policy for droughts proposed under National Disaster Management should be prepared without delay.

7.2. CORAL BLEACHING ON GREAT BARRIER REEF

Why in news?
Australia’s Great Barrier Reef is suffering its worst coral bleaching in recorded history with 93 per cent of the World Heritage site affected.

About coral bleaching
- Bleaching occurs when abnormal environmental conditions, such as warmer sea temperatures, cause corals to expel tiny photosynthetic algae, draining them of their colour.
- When a coral bleaches, it is not dead. Corals can survive a bleaching event, but they are under more stress and are subject to mortality.
- Corals can recover if the water temperature drops and the algae are able to re-colonise them.

Other threats to corals
- Pollution due to agricultural run-off leading to eutrophication, sediments run-off, mining and oil spill pollution.
- Crown-of-thorns starfish prey on coral polyps
- Unsustainable overfishing of keystone species can disrupt food chains vital to reef life.
- Shipping accidents.

About Great Barrier Reef
- It is world’s largest coral reef system composed of over 2,900 individual reefs.
- The Great Barrier Reef can be seen from outer space and is the world's biggest single structure made by living organisms.

7.3. OPEN DEFECATION IN RURAL AREAS: NSSO SURVEY

- According to recently released Swachhta Status Report by the National Sample Survey Office (NSSO), more than half the rural population of the country still opts for open defecation.
- The survey estimates that 52.1% of people in rural India choose open defecation compared to 7.5% in urban. Only 45.3% rural households have a sanitary toilet, while 88.8% in urban areas
- USING TOILETS: In villages, 95.6 per cent of persons from families having access to toilet at home or common facility was using it. This proportion is 98.7 per cent in cities.
- In 55% of villages cleaning was done by person employed by Panchayats or on contract payment. In 17% cleaning was done by residents themselves and about 22.6% were not cleaned.
• In comparison, in cities 73% was cleaned by person employed by local municipal bodies. The other fissures rest at 12% and 8.6% respectively.

Analysis
• A good observation is that families with toilet facility are using it.
• The cheaper bio-latrines promoted by WHO, used all across the world, are not preferred in rural India since these require regular pit-emptying, a task associated with severe forms of social exclusion.
• Local community empowerment is the most powerful tool in the efforts towards making India open-defecation free.

7.4. PROTECTING SACRED GROVES

Why in news
• Recently, the State Medicinal Plant Board of Kerala has undertaken a project to protect these groves by activities like bio-fencing, preparing inventory of plant wealth, cleaning up water bodies and creating awareness about conservation.

What are sacred groves?
• Forest Fragments of various sizes, which are community protected and usually have a significant religious connotation for that community.

Significance of sacred groves
• Traditional uses
  ✓ Medicinal use as it is a repository for plants with Ayurvedic properties.
  ✓ Source of replenishable resources like fruits and honey
  ✓ The groves are often associated with ponds and streams. They help in meeting the water requirement of communities and also in recharging aquifers.
  ✓ Hunting and felling trees is a taboo. This vegetation cover helps in preventing soil erosion.
• Modern uses
  ✓ In modern times, they have become biodiversity hotspots due to progressive habitat destruction in neighbouring areas.
  ✓ They act as a rich gene pool including rare, threatened and endangered species.
  ✓ Sacred groves in urban landscapes act as ‘lungs’ to the city as well

Threats
• Urbanization and encroachment
• Over-exploitation of resources like overgrazing and excessive firewood collection
• Religious practices; clearing them for construction of shrines and temples
• Invasion by invasive species

Protection measures
• The Wildlife (Protection) Amendment Act, 2002 had introduced a new protected area category called ‘community reserve’. Sacred Groves have been put under this.
• Under this significant power is given to the local communities with respect to administration of these areas.
• Many NGOs also work with local people for their protection.

7.5. NATIONAL HYDROLOGY PROJECT

• The union cabinet has approved the Rs. 3,679-crore National Hydrology Project (NHP).
• It aims to collect hydro-meteorological data across India and use it for efficient water management in the country.
Features

- It will set up a system for timely and reliable water resource data acquisition, storage, collation and management.
- It will help to build capacity of state and central organisations in water resource management through the use of information systems and adoption of state-of-the-art technologies like remote sensing.
- Assist in promoting ‘efficient and equitable’ use of water, especially groundwater, down to the village level and provide information on quality of water as well.
- Help in gathering hydro-meteorological data which will be stored and analysed on a real-time basis and can be seamlessly accessed by any user at the state, district or village-level.
- Cover the entire country, unlike earlier hydrology projects that covered only 13 states.
- Funding pattern- 50% would come from World Bank loans while the rest would be given as budgetary support.

Significance

- Better information to the public about availability of water in the country. Thus, prudent decision in activities like cropping pattern can be made.
- Increase in lead time in flood forecast from one day to at least three days.
- Mapping of flood inundation areas for use by disaster management authorities.
- Improved reservoir operations through seasonal yield forecast and drought management.
- Better assessment of surface and ground water resources in a river basin for better planning and allocation of resources.

7.6. CIC ASKS MINISTRY TO MAKE GM MUSTARD BIO SAFETY DATA PUBLIC

- The Central Information Commission (CIC) has asked the Genetic Engineering Appraisal Committee (GEAC), under the Ministry of Environment to make public all the data pertaining to the safety of genetically modified (GM) mustard, except proprietary intellectual property data.
- It said that provisions of the Cartagena Protocol on Biosafety should be kept in mind.
- The transparency panel also directed that the data pertaining to all other GM crops in the pipeline be put in the public domain as that is part of voluntary disclosures under Section IV of the RTI Act.
- Activist groups claimed that GM mustard would be a gateway to other GM food crops - tomato, rice, brinjal, etc. Currently GM cotton is the only transgenic crop commercially available in fields.

Arguments of Ministry against the disclosures

- The ministry objected saying the information is exempted under the RTI clause related to commercial confidence of the third party: the Centre for Genetic Manipulation of Crop Plants.
- They also claimed that the trial is premature and thus information cannot be given.

Cartagena Protocol on Biosafety

- The Cartagena Protocol on Biosafety (CPB), the first international regulatory framework for safe transfer, handling and use of Living Modified Organisms (LMOs) was negotiated under the aegis of the Convention on Biological Diversity (CBD).
- It is an international agreement which aims to ensure the safe handling, transport and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health.

Genetic Engineering Appraisal Committee (GEAC)

- It is a statutory body under Ministry of Environment, Forests and Climate Change (MoEFCC).
- The GEAC the apex body for approval of proposals relating to release of genetically engineered organisms and products into the environment including experimental field trials (Biosafety Research Level trial-I and II known as BRL-I and BRL-II).
It is also responsible for approval of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production.

The two-tier regulatory framework for GM crops includes a Review Committee on Genetic Manipulation (RCGM) under Department of Biotechnology and the GEAC under the MoEF.

The GEAC considers proposals for trial only after approval from the RCGM, a body comprising scientists well versed with the technology.

7.7. DECLINING POLLINATORS: UN REPORT

Background

- A new UN report has warned that many species of wild bees, butterflies and other insects that pollinate plants are shrinking toward extinction.
- The report is based on the studies done by a scientific panel brought together by the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES).
- Two out of five species of invertebrate pollinators, such as bees and butterflies, are on the path toward extinction.

Importance of pollinators

- Pollinators are important to growing fruits, vegetables and cash crops though not so much for cereal crops.
- Food output worth more than $250 depend on pollinators especially industries like coffee, fruits.

Reasons for the decline

- Changing nature of agriculture with reduced diversity and wild flowers for pollinators to use as food.
- Pesticide use.
- Habitat loss to cities.
- Disease, parasites and pathogens.
- Global warming.

Solutions

- The IPBES report makes a number of recommendations:
  - Strong regulations underlying pesticide use; promoting organic farming.
  - Restoration and protection of habitats for wild pollinators; e.g. planting strips of wild flowers to attract pollinators to field of crops, growing plants in back gardens in cities.
  - Better land management. This can be included in the ‘smart city mission’.
  - Improvement in the science of pollination by monitoring wild pollinators; investment in R&D.
- For better monitoring of ecosystems of the country, India has launched a programme to establish a network of Indian Long Term Ecological Observatories (I-LTEO).

About IPBES

- Created in 2012, the IPBES seeks to provide scientific information about biodiversity and ecosystem services to policymakers of the member countries.
- Its secretariat is in Germany and is administered by the UN.

UPSC 2012

Consider the following kinds of organisms:

1. Bat
2. Bee
3. Bird

Which of the above is/are pollinating agent/agents?
(a) 1 and 2 only   (b) 2 only   (c) 1 and 3 only   (d) 1, 2 and 3

Pollination is a process in which pollen is transferred to the female reproductive organs of seed plants, thereby enabling fertilization and reproduction. It is very important for food supply.
7.8. NEW RULES FOR MANAGEMENT OF CONSTRUCTION AND DEMOLITION WASTE

Why in news?

- The Construction and Demolition Waste Management Rules, 2016 notified by the environment ministry aim at creating a process to recover, recycle and reuse this waste.

Need

- Construction activity is one of the main reasons for high air pollution in Indian cities.
- 530 million tonnes of construction and demolition waste is generated in India annually.
- Currently, managed under the existing solid municipal waste management rules which are inadequate. Thus, it is not managed properly.

Notable points

- Responsibility upon local authorities
  - Permission for construction and demolition only after a complete waste management plan is presented to local authorities.
  - To keep a check on those who dispose waste illegally.
- Responsibility upon large-scale generators: they will have to pay relevant charges for collection, transportation, processing and disposal, as notified by the concerned authorities.
- Emphasis on reuse
  - Mandatory for local authorities to utilize 10-20% of construction and demolition waste in municipal and government contracts to lay drain covers etc.

Challenges

- The main challenge is with respect to proper implementation of the rules.
- Appropriate training is needed for contractors and officials before enforcing the clause.
- Appropriate resources, financial and human power, needs to be allocated to local authorities.
- This will also require scaling up of capacity-building and recycling infrastructure.

7.9. THE INVIOLEATE FOREST POLICY

Forest areas are a source of huge mineral wealth as well as ecology and biodiversity. The pressure of development needs and the need to conserve environment presents a dilemma with respect to the forests.

Inviolate forest policy

- It seeks to declare certain areas as out of bounds for activities like mining.
- It was originally called the ‘go-no-go’ area policy.
- First mooted during former environment minister Jairam Ramesh’s tenure in 2009.
- It was a pro-forest policy that kept many coal blocks out of the mining permission.
- It used various criteria for classification of forests like forest density, forest type, biodiversity richness etc.
- However, with time and pressure the policy was diluted. It went through successive revisions with more dilution and opening of greater number of coal blocks for mining.
- The policy was revised for the 4th time in 2014 and since been kept under wraps.
- In November 2014, the expert panel under TSR Subramanium recommended the policy to be further pruned.

Issue

- India has a long-term goal of bringing 33% area under forest cover and creating additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030.
- Present forest cover is 24.16% of total geographical area (December 2015). The pressure on forests is going to further increase due to India’s development needs.
The government is, thus, expected to come out with a policy which sets out clear and scientific criteria to keep certain forests out of the out of bounds for mining and similar activities. It would lend a degree of certainty to the stakeholders about the areas which would be given green clearance to cut forests and mine.

However, with the inviolate forest policy in limbo, this clarity is missing.

UPSC MAINS 2013
Q. What are the consequences of illegal mining? Discuss the ministry of environment and forests’ concept of “GO AND NO GO” zones for coal mining. (200 words)

7.10. CARBON SEQUESTRATION

- Carbon Sequestration is the process by which CO2 is captured from the atmosphere for long-term storage to slow down the accumulation of greenhouse gases.
- There have been many artificial methods of carbon sequestration that have been developed over time. Afforestation, however, is a natural and safe method of sequestration.
- A study by Gujarat Ecological Education and Research (GEER) has prepared a hierarchy of local trees in India on the basis of their capacity for carbon sequestration.
- As per the report, Teak has the highest capacity. A normal teak tree can absorb 3.70 lakh tones of CO2 from the atmosphere in its life-time. It is followed by Nilgiri, Gando baval, Neem etc.

Significance
- It will help the researchers and forest officials to calculate the carbon sequestration potential of the different trees they have.
- This will facilitate better decision making with respect to trees plantation programmes. For example, trees with high capacity can be planted in areas with high CO2 emission.

UPSC 2012
Consider the following agricultural practices:
1. Contour bunding
2. Relay cropping
3. Zero tillage

In the context of global climate change, which of the above helps/help in carbon sequestration/storage in the soil?
(a) 1 and 2 only  (b) 3 only  (c) 1, 2 and 3  (d) None of them

7.11. CLEAN ENERGY IN INDIA

Background
- India needs more than $200 billion (Rs 13 lakh crore) to meet its target of 175 GW of renewable energy by 2022.
- Renewable energy investment has increased from $8 billion in 2014 to $10.9 billion in 2015. However, this is still way behind the required amount.
Issues in financing

- The present system is mostly based on credit from different financial institutions (national, international, multilateral, etc.).
- However, due to high and variable interest rates and short tenor of debt (especially from Indian commercial banks), the cost of renewable energy increases by about 25-30% than similar projects in US.
- Majority of investment is focused on large-scale or grid-scale projects. Smaller projects like off-grid, rooftop, decentralized projects etc. get ignored in the process.
- Increased preference for solar energy is crowding out other innovating though riskier models like small hydro, biomass-to-energy projects.
- Focus is on renewable energy based electricity. Other applications like heating, cooling and productive and mechanical power receives less attention.
- General issues like uncertainty about revenue flows, projects delays, technology and project efficiency concerns etc.

Steps taken

- Indian government has taken several steps like Infrastructure Debt Funds, National Clean Energy Fund, bringing renewable energy under Priority sector lending etc.
- However, given the scale of its targets new innovative financial projects are needed.
- For example, the government is looking to create a $1 billion equity fund for solar energy and tap the potential of Global finance institutions like World Bank in this.

Way forward

- New policies and clarification from the state government on the solar sector on solar park allocation etc. This would bring more confidence from potential investors.
- Financial institutions must come up with innovative financial products for green finance. E.g. Green bonds, Yieldcos, dollar denominated PPA
- Small projects like roof-top panels must be aggregated to create investible portfolios.
- Need to find a balance between rural and urban projects. The latter receive more private investment due to better commercial opportunities.
- International institutions like World Bank must increase their contribution towards renewable energy. Today WB gives 5% to renewable. India demands this to be increased to at least 15%.

UPSC 2012

Consider the following:
1. Black-necked crane
2. Cheetah
3. Flying squirrel
4. Snow leopard

Which of the above are naturally found in India?
(a) 1, 2 and 3 only (b) 1, 3 and 4 only (c) 2 and 4 only (d) 1, 2, 3 and 4

7.12. NGT HALTS TAWANG HYDRO POWER PROJECT

- An ongoing Rs.6400 crore hydropower project in Tawang district has been put on halt by the NGT as the project can adversely impact the habitat of black-necked crane.
- As per NGT, the environmental clearance didn’t consider this impact on the bird.
- This is probably the first time threat to wildlife has played the central role in deciding upon environmental clearance.
Black-necked crane
- Migratory bird most commonly found in China.
- It is legally protected in Bhutan and India and is considered sacred to certain Buddhist traditions.
- **IUCN status**: Vulnerable; Birdlife International- Threatened
- Listed in India’s Wildlife Act as a Schedule 1 species
- It is locally known as Dhung Dhung Karma. Also it is the only high altitude crane amongst the 15 species found in the world.

7.13. PARIS AGREEMENT: ISSUES

Conflict between developed and developing countries
- On 'transparency': Developed countries want a 'common and unified' system to compare the climate actions undertaken under INDCs. Developing countries, however, want the CBDR-RC principle to be reflected in the transparency provision.
- 'Stocktale' provision for estimating the progress in the implementation of INDCs in 5 years. However, the developed countries want to put mitigation aspect specific and hold everyone accountable for that but not the finance and technology transfer provision.
- The principle of 'historical responsibility' is conveniently ignored now; only current emissions are the basis of comparing mitigation strategies. So even if China uses more coal than India, it is ignored because there is an incremental decline even though from a very large base. This is not equity.
- No clarity on finance and technology transfer; IPR issues
- Experts say that target of reducing the temperature by 2°C is over-optimism and not feasible.
- Same is being said about India’s INDC of producing 100GW solar power and 60GW wind power due to high costs of renewable energy and India’s development needs.

7.14. INDOOR AIR POLLUTION

Need
- The quality of air in and around buildings is seriously affected by gases (like CO2, CO, radon, volatile organic compounds), particulates, microbial contaminants or any mass or energy stressor that can induce adverse health conditions.
- In recent years the health problems due to indoor pollution is increasing, a syndrome called Sick Building Syndrome (SBS)
- Source control, filtration and the use of ventilation to dilute contaminants are the primary methods for improving indoor air quality in most buildings.
- **A big problem is absence of an effective air quality measurement system.**
- Many of the harmful chemical gases have low concentrations of ppb (parts per billion) levels and are extremely difficult to detect with current environmental sensor technology, which can only detect concentrations of parts per million (ppm)

Recent development
- Scientists have developed **graphene-based sensor and switch** to detect air pollution at homes.
- The sensor works by detecting the individual CO2 molecules adsorbed onto the suspended graphene one by one by applying an electric field across the structure.
- It brings remarkable improvement is detection limits from ppm to ppb levels. Further, it consumes very low power.
8. CULTURE

8.1. KANIYAN KOOTHU

- Kaniyan koothu is a ritual art form practised during temple festivals in Tamil Nadu, but only by men.
- Kaniyan Koothu gets its name from the community that the artists come from. Kaniyans are a Scheduled Tribe.

The Dance

- The team generally consists of six members.
- **Instrument:** Magudam, or frame drum is the main instrument. It is made by fixing the new hide on the frame with a paste made from tamarind seed.
- The lead singer is called annavi and he leads this troupe.

Tradition

- It has very deep religious significance. It is not about entertainment.
- The team never performs at weddings, deaths and functions at homes.
- The performers receive no formal training; the singers pick up the songs and stories by listening to their fathers.
- Kaniyan Koothu tells Puranic stories such as Markandeya and Harischandra Puranam and tales from Ramayana and Mahabarata, besides local deities.

History

- Kaniyan Koothu is at least 300 years old and can be traced back to 17th century.
- There is a passing reference to the art in Mukkoodarpallu (Tamil poem from the Nayak period).
- But the art form as it is now, similar to a stage performance, is probably 80 years old, and is influenced by Tamil drama.

Kaniyan tribe

- The Kaniyan are a tribal community residing in Tirunelveli district of Tamil Nadu.
- Their population is less than 750 and only around 200 persons are currently performing the art.
- Generally they are uneducated and live in poverty.

8.2. CHERAMAN JUMA MASJID

- The Cheraman Juma Masjid situated in Thrissur district (Kerala), is believed to be the first mosque built in India by Arab traders around 629 AD.
- It is symbolic of active trade relations between India and Saudi Arabia since ancient times.
- The mosque has an ancient oil lamp that is always kept burning and people from all religions bring oil for the lamp as an offering.
- The mosque was reconstructed many times to accommodate increasing visitors.
- The mosque is believed to have been constructed by Malik Bin Dinar, a contemporary of Cheraman Perumal, a Chera King who went to Arabia and embraced Islam after meeting the Holy Prophet at Mecca.

**Why in news?**
The Prime Minister gifted King Salman bin Abdulaziz Al Saud of Saudi Arabia a gold-plated replica of the Cheraman Juma Masjid.
8.3. RANJIT SINGH’S STATUE

- A statue of Maharaja Ranjit Singh will be installed in France’s Saint-Tropez town, the birth place of his Army General Jean-Francois Allard, in September this year.
- Gen. Allard (French) along with Gen. Ventura (Italian) served in the army of Maharaja Ranjit Singh and both made an enormous contribution for the modernisation of his military through their strategic experience and raised Fauj-i-khas, the 'special' or 'royal' brigade.
- It will develop an epoch of Punjab-France relations and will give a boost to tourism.

**Maharaja Ranjit Singh**
- He was the founder of the Sikh Empire, which came to power in the Indian subcontinent in the early half of the 19th century.
- The empire, based in the Punjab region, existed from 1799 to 1849.
- The British had to wait until he died before they could take over the whole of India.

8.4. PHULKARI

- The origin of this art can be traced back to the 15th century AD.
- It is a form of craft in which embroidery is done in a simple and sparse design over shawls and dupattas.
- In some cases where the design is worked over very closely, covering the material entirely, it is called bagh (a garden of flowers).
- The threads used were of a silk yarn called pat.
- Phulkari and baghs are worn by women across Punjab during marriages, festivals and other joyous occasions.

**Varieties:** There are different varieties of phulkaris and baghs made in Punjab.
- **The Chope**: presented to the bride by her grandmother during a ceremony before the wedding, is embroidered with straight, two-sided line stitch and appears the same on the reverse.
- **Vari-da-bagh** (bagh of the trousseau) is also on a red cloth with golden yellow embroidery symbolizing happiness and fertility.
- **Bawan bagh** (fifty-two in Punjabi) has as many geometrical patterns.
- **Darshan dwar** (gate offering a view of the deity) is for presentation in temples or to adorn the walls of the home when the Granth Sahib is brought to a house.
- Besides this, designs inspired by various day to day items, fauna and flora around us also found their way into this craft. Eg. Surajmukhi (sunflower), Mor or tota is one that has a peacock or parrot motif, etc.

8.5. SHYAM BENEGAL COMMITTEE ON FILM CERTIFICATION

**Background**
- The Committee was set up under the Chairmanship of Shri Shyam Benegal to lay down norms for film certification.
- The Committee has to take note of best practices in various parts of the world and give sufficient and adequate space for artistic and creative expression.
- The recommendations of the committee broadly cover the areas related to
  - Film Certification Process and its simplification.
  - Restructuring staffing pattern of Central & Regional censor advisory panels.
  - Recertification of films for purposes of telecast on television and measures to preserve the identity of Indian Cinema.

Why in news?
To celebrate the spirit of its people, Concept 1469 and art historian Alka Pande have come together to organise the third edition of ‘Mela Phulkari: Threads of Punjab’ in Delhi.
The Cinematograph Act and Cinematograph Rules under which the CBFC functions date back to 1952 and 1983, respectively.

Central Board of Film Certification

- Central Board of Film Certification (CBFC) is a statutory body under Ministry of Information and Broadcasting, regulating the public exhibition of films.
- Films can be publicly exhibited in India only after they have been certified by CBFC.
- The Board consists of non-official members and a Chairperson (all of whom are appointed by the Union Government).
- The Certification process is in accordance with The Cinematograph Act, 1952, The Cinematograph (Certification) Rules, 1983, and the guidelines issued by the Central government u/s 5 (B).
- At present films are certified under 4 categories
  ✓ "U" - Unrestricted Public Exhibition
  ✓ "UA" - Unrestricted Public Exhibition - but with a word of caution that Parental discretion required for children below 12 years
  ✓ "A" - Restricted to adults
  ✓ "S" - Restricted to any special class of persons.

Recommendations

- CBFC should only be a film certification body whose scope should be restricted to categorizing the suitability of the film to audience groups on the basis of age and maturity.
- Regarding the categorisation of films, the committee recommends that it should be more specific and apart from U category, the UA Category can be broken up into further sub-categories – UA12+ & UA15+. The A category should also be sub-divided into A and AC (Adult with Caution) categories.
- The Board, including Chairman, should only play the role of a guiding mechanism for the CBFC, and not be involved in the day-to-day affairs of certification of films.
- The total composition of the Board should not be more than nine members and one Chairman.

8.6. THE SIKH GURDWARAS (AMENDMENT) BILL, 2016

About the Bill

- The Bill seeks to amend the Sikh Gurdwaras Act, 1925.
- The bill proposes to remove the exception given to Sehajdhari Sikhs in 1944 to vote in the elections to select the members of the board and the committees constituted under the act.

Sikh Gurdwaras Act, 1925

- The Act regulates administration of Sikh Gurdwaras in Chandigarh, Haryana, Himachal Pradesh and Punjab.
- For this purpose, it established the Sikh Gurdwara Prabandhak Committee (SGPC) for overall administration and management, and set up committees for management of every Gurdwara.

Election to the SGPC and management committees

- The Act provides that every Sikh who is above 21 years of age and is registered as a voter will be entitled to vote in the elections to the SGPC and management committees.
- However, no person who trims or shaves his beard or hair will be entitled to vote in these elections.
- The Act creates an exception for Sehjdhari Sikhs who trim or shave their beard or hair, and allows them to vote. They practice the Sikh faith without strictly adhering to its five basic tenets.
- The Bill removes this exception, disentitling Sehjdhari Sikhs from voting if they carry out these activities.
Who are Sehjdharis Sikhs
- Sehjdharis are those who follow Sikhism but without being Amritdharis, or baptised.
- They do not adopt the baptismal vows of the Khalsa panth initiated by Guru Gobind Singh.
- They might be born in Hindu, Sikh or other families but follow the Sri Guru Granth Sahib.
- Under the Act, Sehjdhari Sikhs are those persons who:
  - perform ceremonies according to Sikh rites
  - do not consume tobacco or halal meat
  - have not been expelled from the religion for committing a religious transgression, and
  - Can recite the Mul Mantra (a Sikh prayer).

8.7. KALAMKARI ART

Why in news?
- A series of exclusive Kalamkari works on the Ramayananam and other selected themes have highly appreciated during an exhibition held in France recently.

Kalamkari painting
- The word is derived from the Persian words kalam (pen) and kari (craftsmanship), meaning drawing with a pen.
- These paintings are made on cloth. It is hand painted as well as blocks printing with vegetable dyes applied on cloth.
- The art of painting using organic dyes on cloth was popular in several parts of India, but this style of Kalamkari flourished at Kalahasti and at Masulipatnam.
- This art is mainly related to decorating temple interiors with painted cloth panels, which was developed in the fifteenth century under the patronage of Vijaynagar rulers.
- They are very durable and flexible in size and made according to theme.
- Subjects are adopted from the Ramayana, the Mahabharata and Hindu religious mythology.
- This cloth painting process involves no chemical product and the excess dyes that flow into the rivers while washing do not pollute it.

Two distinctive styles
- There are two distinctive styles of Kalamkari design in India — one, the Srikalahasti style and the other, the Masulipatnam style of art. Both the styles are different in practice.
- The Masulipatnam style of Kalamkari is influenced by Persian art. The motifs used are trees, flowers and leaf designs are printed using blocks.
- The Srikalahasti style flourished around temples with Hindu patronage thus has an almost religious identity, wherein the kalam or pen is used for freehand drawing of the subject, and filling in the colours is entirely done by hand.

8.8. BUDDHIST INSCRIPTION FOUND

- A 12th century inscription was found in Gadag district, Karnataka
- It sheds more light on the history of Buddhism in Karnataka.
The period of this inscription could be assigned to the regime of Hoysala king Veeraballala II (1173–1220 CE).
The inscription, whose lower portion has been severed off, makes salutations to Lord Buddha, ‘dhamma’, ‘sangha’ and Tara Bhagavati.
There are possibilities of the inscription speaking about donations to a Buddhist monastery located at Lakkundi.
It was among a handful of inscriptions making specific reference to the Tara Bhagavati cult of the Vajrayana Buddhism which was popular here till 12th century.
Discovery of this inscription establishes the existence and popularity of Buddhism in this part of the State.
The Kodangallur in Kerala is considered to be one of the oldest Bhagavathi shrines. The area appears to be originally was a Buddhist shrine.

8.9. DECODING OF TEXT ON AN ANCIENT COPPER PLATE

Why in news?
Researchers from the Bhandarkar Oriental Research Institute (BORI), which houses South Asia’s largest collection of manuscripts and rare texts, have decoded a copper plate.

Conclusions from the copper plate
- The date of Emperor Harshavardhan’s defeat to the Chalukya King Pulakeshin II is fixed at 618 AD.
- It was believed that the battle occurred sometime between 612 AD and 634 AD. But now, it can be ascertained definitively to have taken place in the winter of 618-619 AD.
- The plate is also useful in fixing the details of the coronation of Pulakeshi II in 610-611 AD,
- The plate further records the grant of 50 ‘nivarthanas’ (a unit of land) by Pulakeshin from the village Brahmana-Vataviya (in modern-day Paithan Taluka of Aurangabad) to a Vedic scholar, Nagasharma.

The Battle of Harshvardhan and Pulakeshin II
- The battle was fought on the banks of the Narmada.
- Pulakeshin, who ruled from the Chalukyan capital of Badami, challenged Harsha’s conquests.
- Unwilling to tolerate the existence of a powerful rival in the south, Harsha had marched from Kanauj with a huge force.
- Such was Pulakeshin’s efficiency in guarding the passes of the Narmada that Harsha was compelled to accept the river as the demarcation and retire from the battlefield after losing most of his elephant force.

8.10. KOMAGATA MARU INCIDENT

Why in news?
- On May 18, standing before the House of Commons, Canadian Prime Minister Justin Trudeau will offer a full apology for the Komagata Maru incident.

The incident
- Over a century ago, on May 23, 1914, a cargo steamship named Komagata Maru sailed into Burrard Inlet in British Columbia, Canada, on which Vancouver harbour is located.
- The vessel was chartered by a Singapore-based businessman named Gurdit Singh.
On it were 376 passengers from Punjab who had come aboard in batches at the ship’s departure at Hong Kong. The ship was forced to return to Calcutta, 19 of the passengers were killed by the British and many placed under arrest. Under a “continuous journey regulation”, immigrants who had not arrived in Canada by a continuous, non-stop journey from their native countries were denied entry. While the laws never explicitly restricted the entry of Indians, they made it virtually impossible for Indians to emigrate, because there was no direct route from India to far-off Canada then. (The Komagata Maru had arrived from Hong Kong.)

8.11. SAHAPEDIA

- It is an open online portal that seeks to celebrate the unseen or less-noticed cultural expressions across India and South Asia.
- Its name comes from-saha means together and pedia comes from the Greek word paideia, meaning cultural education.
- Modelled on Wikipedia, the free site will encourage contributions from everyone.
- However, unlike Wikipedia, where anyone can contribute, here we can have one overview article by an expert of that domain. The information will be moderated, checked and then published with attribution.
- Sahapedia has also tied up with various institutions to create specific modules or workshops on subjects, such as Ramleela and Ajrakh printed cloth, among others.

8.12. KOHINOOR DIAMOND

- The Supreme Court is hearing a petition on whether the government intends to make a bid to get back the Kohinoor.
- Government earlier told the Supreme Court that the Kohinoor diamond was given as a “gift” to East India Company by rulers of Punjab, but later said “it reiterates its resolve to make all possible efforts to bring back the Kohinoor diamond in an amicable manner”.

Retrieval of Kohinoor

- The Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, adopted by UNESCO in 1970 can be used by India to claim rights on Kohinoor.
- However, the draft of the UNESCO Convention does not make it explicit that it can be applied retrospectively.
- India’s Antiquities and Art Treasures Act, 1972 that has provisions for prevention of smuggling of and fraudulent dealings in antiquities and also provides for the compulsory acquisition of antiquities and art treasures for preservation.


The Convention, which has been ratified by more than 120 countries, provides a framework for cooperation to clarify the procedure for the removal of archaeological and ethnological material from one country to another.
8.13. APATHY TOWARDS ANTIQUITIES

Issues surrounding Antiquities

- An integrated database of existing and stolen artefacts, hardly exist.
- Providing sufficient information regarding theft cases has been a struggle. For instance, to a question raised in Parliament in 2010 about the number of antiquities stolen, the government provided a list of 13 thefts that occurred between 2007 and 2010. The number of thefts reported also appears too few to be true.
- At the national level, the Central Bureau of Investigation handles antiquities theft but it has not built the capacity to deal with stolen antiquities.
- A few State governments have special wings as part of their police force, but these are also understaffed and unqualified.
- The Antiquities and Art Treasures Act, 1972, mandates compulsory registration of antiquities. However, the process is so cumbersome that not many antiquities are registered.
- The state of India’s museums is also poor.
- In 2007, the Ministry of Culture launched the **National Mission on Monuments and Antiquities** to complete documentation of about 70,000,000 antiquities. Until 2014, it had documented only 8,000,000 artefacts.
- The audit also raised serious concerns about the “discrepancies in the number of antiquities reportedly available in museums” including the National Museum in Delhi.
9. ALSO IN NEWS

9.1. RAJASTHAN URBAN LAND (CERTIFICATION OF TITLES) BILL 2016

Why in News?
- Rajasthan became the first state in India to enact a law on property titles in urban areas.

What it means?
- State residents living in urban areas can seek a certificate of ownership of their lands by paying a nominal fee to the state government.
- It is voluntary for the owners to apply for these certificates.

Background
- Ill-defined property rights and high transaction costs in land market have become one of the most significant factors affecting the country’s ease of doing business.
- A 2014 report by Rights and Resources Initiative (RRI) shows that over 25% of districts are affected by land conflicts.
- There is no legal provision for a land owner to register his property with a notified authority.
- Most municipal governments are unable to undertake more than 50% collection on property taxes or development charges, mainly due to poor records of property ownership.

Impact
- This Bill will give a clear title to the owner and will reduce litigations in the courts.
- It will also help in curbing fraud practices in sale and purchase of non-agricultural land in urban areas.
- This will create an efficient and transparent modern land market, provide certainty of tenure and end litigation that often mires development projects.
- It will enable the use of land as an asset for accessing credit.
- It will also delineate the difference between rural and urban areas with its geographical information system (GIS) and help in better price determination in accordance with the provisions of the land acquisition bill.

Provisions of the Act
- An independent Land Title Certification (LTC) authority will be constituted, which will be the custodian of Register of survey records and registrations of title certificates issued.
- A digital platform, CLEAR (Computerized Land Evaluation and Administration of Records) will be created to record and manage documents in the ULCT system.
- A tribunal to be established to hear appeals against orders of the authority and adjudicate on them.

9.2. DISPUTE RESOLUTION MECHANISM FOR PPP

Why in news?
- NITI Aayog’s CEO has said that dispute resolution mechanism would be in place for PPP projects very soon.
- Also recently, the Kelkar committee proposed setting up of two tier framework of Infrastructure PPP Project Review Committee (IPRC) and Infrastructure PPP Adjudicatory Tribunal (IPAT).

Why is a dispute resolution mechanism required?
- Provide flexibility to restructure the project within the commercial and financial boundaries/limits.
- Ensure equitable risk sharing between private entity and the govt.
- To revive stalled Infrastructure projects, which have led to increase in rising NPAs in banks.

What is the dispute resolution mechanism?
- In the event of a dispute between a private party and the government, the concerned party can move to IPAT which, after judging its admissibility, will set up a multi-disciplinary expert committee (IPRC) with relevant expertise for the specific case.
- After reviewing recommendations of IPRC, IPAT will hear representations from all stakeholders and pronounce an order within a specified time frame.
- The final order of IPAT can be challenged only before the Supreme Court.
9.3. UNMANNED GROUND VEHICLES (UGVS)

- Unmanned Ground Attack Vehicle Capable, developed by DRDO, was showcased at DEFExpo 2016 and is still in its initial stages of development.
- It would be a part of future combat operations in terrains and situations difficult for conventional manned vehicle.
- The UGV would be autonomous and will be capable of Reconnaissance (exploration outside an area occupied by enemy forces) & Target Identification.
- It would be able to operate in stealth around its terrain for nearly 50kms and carry weapons nearly 50kgs, however the decision to use lethal force will be under human control.
- Actual vehicle is expected to have better off-road capabilities and will be able to carry two Light rockets or Machine Guns to be operated at low intensity conflicts.

9.4. SILICA AEROGEL

- It is world’s lightest thermal insulator.
- **Why needed:** In the past three years, at least 41 soldiers have lost their lives at the Siachen Glacier because of extreme weather. It can protect soldiers from extreme weather conditions.
- This aerogel is actually a solid but within its complex matrix it encapsulates 99 per cent air.
- Silica aerogel can also be used for insulating the tanks that hold the liquid hydrogen and liquid oxygen in the cryogenic engines.

9.5. KUNPENG-1B

**Features**

- Launched by China
- It is a sounding rocket.
- **What is sounding rocket:** Sounding rockets are low-cost launch vehicles designed to carry scientific instruments that take measurements during the rocket’s sub-orbital flight.
- It will take measurements in upper atmosphere and help with high-speed flight and space tourism research.

9.6. AADHAAR ENROLMENT HITS 100-CRORE MILESTONE

- The Unique Identification Authority of India (UIDAI) has generated 100 crore Aadhaar numbers in a span of five-and-a-half years
- Among the 100 crore people, 93 per cent are adults, 67 per cent are between 5-18 years old and 20 per cent belong to the 0-5 years age group
- The government has decided to stop issuing new smart cards to beneficiaries of government schemes as Aadhaar is now backed by a law.

9.7. PM LAUNCHES STAND UP INDIA: UPDATES

*For details please refer earlier article on Stand Up India. This article only contains updates on the scheme.*

- Prime Minister launched Stand Up India scheme which facilitates bank loans between Rs 10 lakh and Rs 1 crore to SC, ST and women borrowers setting up greenfield enterprises in the non-farm sector.
- PM also launched the logo for Stand Up India with the tag line “Karen Prayas, paayen vikas”.
- As part of the launch event, he distributed 5,100 e-rickshaws under the Mudra Yojna Scheme.
- The e-rickshaws were received by cycle rickshaw owners as well as women and transgenders.
9.8. REVISION OF MONTHLY WAGES FOR CONTRACT WORKERS

- Labour Ministry has proposed to amend the Contract Labour (Regulation and Abolition) Central Rules, 1971 and increase minimum monthly income to Rs 10,000 for contract workers as against the current wage of Rs 6000 per month.
- This would be valid for contract workers for all kind of works.

Likely Positive Impact
- This would benefit the 60 lakh contract workers covered under the Contract Labour (Regulation and Abolition) Act, 1970.
- As per NSSO, contract labourers are poorer than regular workers.
- Increased wages may reduce the numerous strikes by contract labourer in demand for better wages.

Likely Negative Impacts
- This may adversely affect the MSMEs who operate on low margins and may not have resources to hire people at increased wages.
- It may lead to shift of employment to bigger cities where minimum wages are at par with Rs 10000 per month.
- This may encourage more informal jobs as the employer can get all kinds of work done by the contract labour with still lesser minimum wage compared to regular worker.
- The move is seen in violation of Contract Labour (Regulation & Abolition) Central Rules, 1971, which requires that contract labours be paid minimum wages equal to regular wages for similar kind of work.
- This may even promote more capitalization of industries, thus reducing employment.

Conclusion
- The decision to increase the wages appears to be a good one considering the plight of contract workers.
- However, there may be negative unintended consequences of the move which may further lead to exploitation of contract workers.
- Therefore, various stakeholders including industries, trade unions, govt officials and bodies representing workers should be consulted thoroughly before finalizing the proposal.

9.9. NEW POLICY FOR LIBERALIZING ALLOCATED SPECTRUM

- Union cabinet has agreed for a new policy for liberalizing allotted spectrum, which will enable telecom service providers to share & trade airwaves allocated to them.
- Earlier Spectrum allotted with licences can only be used to deploy services for which the licence has been provided.
- Telcom can now liberalize their airwaves in the 800MHz (used for 4G LTE services) frequency in four circles – Karnataka, TN, Kerala, & Rajasthan by paying a reserve price set by TRAI.
- However once the auction is completed, the service provider has to pay the difference between the base price & auctioned determined price, on a pro data basis.
- The move is expected to benefit, Reliance Comm Ltd, Reliance Jio and Tata Teleservices who are exploring options to trade spectrum in 800MHz band.

9.10. BRICS CITIES CONCLAVE

- 75 delegates from major cities of BRICS nations, including Shanghai, Johannesburg, Rio de Janeiro, and St Petersburg, attended a three-day conclave on urban planning in Mumbai.
• The focus was on issues of urban development such as urban transport, affordable housing, models of city governance, building sustainable cities, and financing city infrastructure.
• It was organised by a private thinktank “Mumbai First”, along with the Government of India and Government of Maharashtra.

Highlights of the conclave
• There was emphasis on the need to change taxing pattern, evolve participatory budgeting and take firm decisions to complete infra-projects on time.
• A bilateral agreement in place between Mumbai and Shanghai to be sister cities since September 2014.
• Maharashtra government will look for expertise from St Petersburg in Russia to clean up the Mithi River and make it navigable, with plans of using the 18-km river for transportation.
• Mumbai will also develop transit-oriented development (TOD), which refers to density proportionate to easy access to mass transit infrastructure.

9.11. EARTH DAY
• Earth day is an annual event celebrated each year on April 22.
• On this day events are held worldwide to demonstrate support for environment protection.
• Theme for 2016 - ‘Trees for the earth’
• The first celebration was held in 1970 after a devastating oil spill in US, and is widely regarded as the beginning of the modern environmental movement.
• It was made into an international day in 1990 and now is celebrated by over 193 countries every year.

9.12. PANAMA DISEASE IN BANANA CULTIVATION
• A soil borne fungus is causing Panama disease in the banana crops across Kerala.
• This is leading to a potential crisis for farmers which if not checked could turn into an epidemic.

Why a big concern
• Modern banana breeds cannot reproduce sexually because they have no seeds and develop through asexual reproduction by planting the fruiting stem. As a result, banana plants are nearly identical genetically and thus have same susceptibility to diseases.
• Once a pathogen overcomes the plant’s defenses, it can quickly infect the whole cultivated area.
• Generally fungicides are used for controlling such diseases. However, experts have pointed out that this pathogen is resistant to fungicides and cannot be controlled chemically.

9.13. MAD COW DISEASE
What is it?
• Creutzfeldt–Jakob disease (CJD) is a rare degenerative neurological disease that is incurable and fatal.
• It is also called the human form of mad cow disease i.e. Bovine spongiform encephalopathy (BSE) since it is the cause for many variants of CJD.
• An infectious agent called a Prion causes CJD. Prions are mis-folded proteins.
• CJD causes the brain tissue to degenerate rapidly and the brain develops holes like a sponge.

Why a cause for concern
• Easy transmission - CJD is transmitted from humans to others in the same forms as HIV.
• Difficult detection - it can remain dormant for many years with only psychological symptoms.
• No cure is present
• Increasing incidence in India - while the disease remains extremely rare with an incidence rate of 1 in 1.5 million, at least 6 cases of CJD have been reported in India in last 1 year (Guntur district).
9.14. TRANSNATIONAL SKILL STANDARDS IN INDIA

- Skill Development and Entrepreneurship Ministry has launched “Transnational Skill Standards” in India to align to globally recognized skill standards.
- These standards in skill development are benchmarked to United Kingdom across 82 identified job roles.
- To cover the gaps, ‘bridge training’ will be provided.
- It will also help in supporting two major initiatives of the Government i.e. “Make in India” and “Skill India”.
- Standardisation of vocational education is crucial in bringing about a level in the efficiency of the skilled workforce.

9.15. WHATSAPP ENCRYPTION POLICY

WhatsApp has added **end-to-end encryption** to all of its messages.
- WhatsApp encryption uses a 256-bit key, which is only known to the sender and recipient, hence called “end-to-end”.
- **End-to-end encryption ensures an** individual’s right to total privacy.
- It will ensure safety of digital data from **cybercriminals, hackers and also oppressive regimes**.

**Government response to encryption policy**
- Strong or end-to-end encryption has led to **disagreements between tech companies and governments**.
- Security agencies fear that it will allow **criminals and terrorists to communicate safely**.
- Recently, U.S. government had asked Apple to provide a backdoor entry into encrypted iPhone, which was denied by the company.

9.16. PARYAVARAN CHAVADI

- With Maharashtra facing one of its worst droughts a group of environmentalists and water conservationists organized a “paryavaran chavadi” to discuss environment problems.
- “Chavadi”, a traditional facet of Maharashtra’s rural life, is a place where village community gathers and public business is transacted.
- It is a community initiative which encourages participation from all walks of life.
- A common man can discuss issues with experts, bureaucrats, and various other stakeholders in this environmental symposium.
- It’s a unique democratic space where discussion focused on tree conservation and steps to deal with the city’s acute water crisis.

9.17. YELLOW FEVER

- There is a deadly outbreak of yellow fever spreading from Angola.
- WHO has listed over 40 countries, including Angola, Cameroon, Congo, Kenya, Mali, Senegal, Sudan, Uganda, Brazil, Columbia, Ecuador, Paraguay and Venezuela, as yellow fever endemic countries.
- Angola’s outbreak has already spread to other countries in Africa, including the Democratic Republic of Congo (DRC), and at least 11 cases of yellow fever have been imported into China.

**Yellow fever**
- Yellow fever is an acute viral flu-like disease transmitted by infected mosquitoes.
- It is transmitted by the same mosquitoes that spread the Zika and dengue viruses.
- The virus is endemic in tropical areas of Africa and Latin America, with a combined population of over 900 million people.
• Mosquito is the primary vector. It carries the virus from one host to another, primarily between monkeys, from monkeys to humans, and from humans to humans.
• Several different species of the Aedes and Haemogogus mosquitoes transmit the virus. Vaccination is the most important preventive measure against yellow fever.
• The “yellow” in the name refers to the jaundice that affects patients.

9.18. WORLDWIDE INCREASE IN TIGER POPULATION

• The number of wild tigers has gone up globally by 22 per cent to 3,890, from the earlier 2010 estimate of 3200, according to the World Wildlife Fund and the Global Tiger Forum (GTF).
• India leads with an estimated population of 2226, up from 1706 in 2010.
• Karnataka has the highest number of tigers followed by Uttarakhand.
• Further, the WWF TX2 goal of doubling the population to 6400 tigers by 2022 is still far.

9.19. INDIA OVERTAKES CHINA AS TOP FDI DESTINATION

• As per the report by Financial Times, India with $63 billion of FDI in 2015 has replaced China in terms of Greenfield capital investment.
• FDI project announcements were mainly in high value areas like coal, oil and natural gas and renewable energy sectors.
• 98% of the FDI were through automatic route.
• In a comparison between Indian and Chinese states, Gujarat emerged as the top state in terms of FDI.
• Domestic market growth potential and proximity to markets as the main two reasons for investing.

9.20. NEW COMPUTER RELATED INVENTION (CRI) GUIDELINES

Why in news?
Office of Controller General of Patents, Designs and Trade marks (Indian Patent Office or IPO) issued a revised set of Guidelines for Examination of Computer-Related Inventions.

Guidelines - It introduces a new three step test in examining CRI applications:
• Properly construe the claim and identify the actual contribution;
• If the contribution lies only in mathematical method, business method or algorithm, deny
• If the contribution lies in the field of computer programme, check whether it is claimed in conjunction with a novel hardware, if the contribution lies solely in the computer programme, deny the claim. If the contribution lies in both computer programme and hardware, proceed.

Arguments in support of guidelines
• The new Guidelines are now in line with the provisions of the Patents Act 1970 (Section 3(k)) that exclude mathematical methods, algorithms and computer programmes per se from patentability.
They will ensure that India’s software industry does not fall victim to the very common phenomena of ‘patent thickets, trolls’ as prevalent in countries like USA.

These guidelines ensure that India’s position is now similar to the stand taken by United States and Europe while determining patentability for computer related inventions.

**Arguments against the guidelines**

- Objections have come from the legal fraternity which concerned about the loss of business (no patents, no patent litigation), and
- Also from multinational corporations (MNCs), with business models based on proprietary software, trying to stay relevant in fast-changing world of collaborative engineering and open-source software.
- According to them, the guidelines will supposedly result in the stifling of innovation.

**Indian Patent Office**

- **The Indian Patent Office** is administered by the Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM).
- The CGPDTM reports to the Department of Industrial Policy and Promotion (DIPP) under the Ministry of Commerce and Industry and has five main administrative sections: Patents, Designs, Trademarks, Geographical indications, Patent Information System

### 9.21. MINISTRY OF HAPPINESS IN MADHYA PRADESH

- MP Chief Minister has announced a 'happiness ministry' to measure the state's progress and growth.
- The state will be made responsible for happiness and tolerance of its citizens.
- He has also proposed to invite psychologists to counsel people how to be always happy.

**Other Examples**

- Bhutan measures prosperity by estimating citizens' happiness popularly known as Gross National Happiness.
- United Arab Emirates (UAE) is the only country to create posts of minister of happiness in the government.

### 9.22. NEW PRIMATE SPECIES SIGHTED

- A new species of primate called **White-Cheeked Macaque** was sighted by photographers in Arunachal Pradesh.
- Macaques are distant cousins of langurs and gibbons.
- Earlier Arunachal macaque (Macaca munzala) was discovered in 2005.

**Kinds of monkeys in India**

- Rhesus monkey; the most common found in urban and rural India
- Arunachal macaque, Assam Macaque, Pig-tailed macaque and stump-tailed macaque- found in north-eastern India
- Lion-tailed macaque- in western Ghats; IUCN status- Endangered
- Golden Langur in Assam, Capped langur in north-east India, Nilgiri Langur in Nilgiri hills
- Hoolock Gibbons in north-east India- only species of ape found in India
- Slender Loris- nocturnal primate found in southeastern ghats of India
9.23. GENERIC MEDICINE PRESCRIPTION LAW

- The Central government is considering introduction of a law making it mandatory for doctors to prescribe generic medicines accessible at affordable rates through state run Jan Aushadi Stores.
- The government plans to start 3000 Jan Aushadi stores across the country where generic medicines will be available at affordable costs.
- But the hurdle faced is that doctors do not usually prescribe generic medicines and prescribe more expensive branded medicines.
- Ex-factory costs of branded medicines tend to multiply several times due to supply chain costs and incentives to Medical Representatives.
- A Lancet Study shows that out India’s health expenditure 58 percent accounted for out of pocket expenditure and two thirds of this is on drugs.
- Risk cover is confined to part coverage of hospitalization drugs not prescription medicines.

9.24. NAGORNO-KARABAKH REGION

- Fierce clashes erupted along frontline of Nagorno-Karabakh between Armenia and Azerbaijan in April. The outbreak of hostilities is the worst since war that ended in 1994.
- The Nagorno-Karabakh conflict is an ethnic conflict between the Republic of Armenia and Azerbaijan over the self-declared Nagorno-Karabakh Republic.
- The region is in Azerbaijan populated primarily by ethnic Armenians.
- Karabakh is technically part of Azerbaijan but has been run by an ethnic Armenian government ever since Soviet Union collapsed.

9.25. EXPENSIVE LEGAL SYSTEM SURVEY REPORT

- A non-profit organisation Daksh has conducted the nationwide “Access to Justice” survey in 24 States.
- The study estimates that litigants typically lose Rs 1,746 in wages or business per day per case, which adds up to over Rs 50,000 crore ($7.5 billion) annually.
- The loss of productivity due to attending court hearings because of wages and business lost comes to 0.48% of the Indian GDP.
- 90 per cent of the litigants earn less than Rs. 3 lakh per annum and the median expected cost of litigation for this group is around Rs. 16,000.
- Around half the litigants cited expense as a major deterrent for filing appeals in the High Court if their cases were not resolved in their favour.
- Disposal Time: Findings from survey clearly highlights that India’s courts remain painfully slow, draining ordinary citizens financially.

9.26. PUBLIC SAFETY

Why in News?
- There was a fire tragedy at the Puttingal Devi temple in Kollam, Kerala, which claimed more than 100 lives.
- The fire was triggered by a display of fireworks and it caused explosions in a storehouse.

Issues
- Poor and dysfunctional emergency rescue infrastructure such as fire extinguisher facility, medical aid.
• Casual police practices and not fixing accountability of the security team.
• Not following standard operating procedure as notified by the government officials. Organizers displayed the fireworks despite permission being rejected by the District Collector.
• Workers and volunteers were not trained in crowd management.
• Lack of co-ordination between police forces, administration and event organizers.

Way Forward
• Public safety policies should be delinked from religion and politics.
• **Proper planning**: detailed staffing plan should be done.
• Train workers in crowd management procedures and the emergency plan.
• Position security or crowd managers to the sides of entering (or exiting) public, not in the center of their path.
• Provide a safe exit for people.
• It is the quality of deployment, combined with the severity of adherence to the standard operating procedure which would make this kind of event successful.

1.27. PRESS FREEDOM INDEX

• Recently, The **Reporters Without Borders (RSF)** has published the ‘World Press Freedom Index’ for the year 2016.
• The top line of the Index is occupied by three Nordic countries: Finland (the first since 2010), the Netherlands, and Norway.
• India ranks **low at 133 among 180 countries** in the latest ranking though India jumped three spots from the 136th position it had in 2015.
• The end of the index is occupied by Turkmenistan (178th), North Korea (179th) and Eritrea (180th).
• Among India’s neighboring countries, Pakistan ranks 147, Sri Lanka 141, Afghanistan 120, Bangladesh 144, Nepal 105 and Bhutan 94 and China is ranked 176.
• The United States is ranked 44th and Russia is placed at the 148th place.
• The report shows that there has been a deep and disturbing decline in respect for media freedom at both the global and regional levels.