CURRENT AFFAIRS
NOVEMBER 2016
PART - 1
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1. POLITY AND CONSTITUTION

1.1. REGULATION OF MEDIA

Why in news?
- Inter-ministerial committee instituted by the Information and Broadcasting ministry ordered that the Hindi channel NDTV India be shut down for a day for allegedly revealing “strategically sensitive” details during its coverage of the Pathankot attacks in January.
- This action has come under severe criticism for impinging the Freedom of the Press.
- As of now, the ban has been put on hold. The SC is yet to hear the appeal against the ban on NDTV, scheduled on December 5.

Criticism of decision
- Editor’s Guild strongly condemned the unprecedented decision of the committee and demanded that the order be immediately rescinded.
- The government’s decision was a direct violation of freedom of media and therefore the citizens of India.
- Imposing a ban without resorting to judicial intervention or oversight goes against the spirit of the Constitution and is violative of the principles of natural justice.

Suggestions
- There should be detailed guidelines laid down for the news channels, in relation, to broadcasting during a terrorist attack.
- The government should work with the media, the armed forces and all the stakeholders to create a system so as to prevent leakages.
- Media has to be more responsible when it comes to broadcasting such sensitive issues.

Way forward
- Live coverage of terror events and the compromise of ongoing operations is now a global point of debate to create a balance between the right to allow dissemination of information in real time and aiding and abetting the enemy by providing helpful data on what’s going on to winkle them out.
- It’s time to establish an independent television media watchdog on the lines of the Press Council of India to ensure the freedom of the televised press. The UK has an independent media watchdog Office of Communications (Ofcom) that is recognised by statute and has enforcement powers to enforce the regulations.

Press Council of India:
- It is the apex body for the regulation of the Press in India.
- It enjoys independence from the government.
- It acts as the regulator that prescribes and enforces professional standards for the print media in India.

News Broadcasting Standards Authority:
- It is an independent body set up by the News Broadcasters Association.
- It is headed by eminent jurist.
- Its task is to consider and adjudicate upon complaints about broadcasts. It has laid down the Code of Ethics and Broadcasting Standards for violation of which a complaint may be made.

Broadcasting Content Complaints Council (BCCC):
- It is the independent self-regulatory body for non-news general entertainment channels set up by the Indian Broadcasting Foundation (IBF) in June 2011.
- There is a constructive recognition of BCC’s self-regulatory mandate by the Ministry of I&B, which refers complaints received/generated by it to the Council.

Similar actions in the past:
- Between 2004-2010 atleast 180 show cause notices were sent to various channels - MIB
- Between 2005-2016, 30 channels have been ordered to be banned for violations of the Programme and Advertising Code - MIB
- Between 2005-2013 during the UPA regime 20 channels were taken off air.
- Most of the earlier cases were in relation to adult content on television channels.

1.2. AIJS

Prime Minister recently revisited the possibility of recruiting judges through an All India Judicial Service (AIJS).

Rationale for AIJS
- It focuses on quality of judges rather than quantity.
- Appropriate way to recruit the best talent required for fulfilling the role that is demanded of a judge.
• **Currently** the subordinate judiciary depends entirely on **state recruitment**. But the brighter law students do not join the state judicial services because they are **not attractive**.

• **With no career progression**, no one with a respectable Bar practice wants to become an additional district judge, and deal with the hassles of transfers and postings. Hence the quality of the subordinate judiciary is by and large average.

**Previously recommended by**

• **First Law Commission of India (LCI) in its 14th Report** on Reforms on the Judicial Administration, recommended an AIJS in the interests of efficiency of the judiciary. In its **77th Report the LCI once again** said the AIJS needed serious consideration.

• The idea of an AIJS was **approved in the chief ministers’ conference** in 1982

• The **Supreme Court has itself** said that an AIJS should be set up, and has directed the Union of India to take appropriate steps in this regard.

• After the **Swaran Singh Committee’s recommendations in 1976**, Article 312 was modified to include the judicial services.

**Way forward**

• A **career judicial service will make** the judiciary more **accountable, more professional**, and arguably, also more **equitable**.

• It can have far-reaching impact on the **quality of justice and on people’s access to justice** as well.

• The PM and the CJI have raised red flags about the problems that plague the courts. There is no time better than now to start doing something about these problems.

### 1.3. LESSER WAGES FOR EQUAL WORK IS VIOLATION OF HUMAN DIGNITY: SC

**Why in news**

• Supreme Court has held that they **daily wagers, temporary, casual and contractual employees** should be paid at **par with regular employees** doing the same job as them.

• The petitioners were daily wagers working for Punjab Government.

**Significance**

• **SC termed denial of equal pay for equal work** as “**exploitative enslavement**”. Such an action besides being demeaning, strikes **at the very foundation of human dignity**. Court empathized with the condition of a helpless employee.

• **SC cited that India has been a signatory for the past 37 years** to Article 7 of the **International Covenant on Economic, Social and Cultural Rights of 1966**.

• According to different **constitutional provisions and the law declared by the Court under Article 141 of the Constitution**, the principle of **‘equal pay for equal work’** constitutes **"a clear and unambiguous right"** and is vested in every employee, whether engaged on regular or temporary basis).

• The **Constitution of India 1949: Art. 39 (d)** say the state has to ensure that there is equal pay for equal work for both men and women.

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**International Covenant on Economic, Social and Cultural Rights (ICESCR)**

- It is a multilateral treaty adopted by the **United Nations General Assembly** in **1966**

- It commits its parties to work toward the granting of economic, social, and cultural rights (ESCR) to the Non-Self-Governing and Trust Territories and individuals, including labour rights and the right to health, the right to education, and the right to an adequate standard of living.

The ICESCR is part of the **International Bill of Human Rights**, along with the Universal Declaration of Human Rights (UDHR) and the International Covenant on Civil and Political Rights (ICCPR).
1.4. RTI PERFORMANCE: STUDY

Why in news

A new study on the performance of the adjudicators of the Right to Information (RTI) Act has raised many important questions.

Findings

- Information commissions (ICs) imposed the penalty for denial of information (in violation of the RTI Act) in only 1.3 per cent of the cases where penalty was imposable. This promotes a culture of impunity.
- By foregoing of penalties (Rs. 25000 under RTI Act) has caused an estimated annual loss of Rs. 290 crore to the exchequer.
- Even more important than the revenue lost is the loss of deterrence value that the threat of penalty was supposed to have provided.
- Two provisions of the RTI Act invoked the most for denial of information were section 7 (9) (disproportionate diversion of resources) and section 11 (1) (third party information).
  “Neither of these can themselves be used to deny information,” noted the study.
- Many of the state commissions had not posted their annual reports on the web and very few had updated the information.
- Despite the dictum of the Supreme Court, more than 60 per cent of the IC orders analysed contained deficiencies in terms of not recording critical facts.
- Rajasthan and Bihar’s State Information Commissions (SIC) were the worst performers, with 74 per cent and 73 per cent of the orders not describing the information sought.
- The collective backlog in the disposal of appeals and complaints in the 16 SICs studied, was an “alarming 1,87,974 cases pending” as on December 31, 2015.
- The Chief Information Commission (CIC) saw a rise in pendency of 43 per cent.

Way forward

- There needs to emerge, through a broad consensus, an agreement on the number of cases a commissioner should be expected to deal with every month.
- Well before a commissioner is due to demit office, the process of appointment of his replacement should be initiated so that the new commissioner joins as soon as the previous one leaves.
- The study has called for a review of the structures and processes of the ICs. With the help of a trained cadre of officers, the burden of work will be shared and the process of first communication from the IC can be restricted to 30 days.
- Suggestions by former information commissioner Shailesh Gandhi –
  - At the time of the selection of the information commissioners itself, a deposition should be taken from them stating that they would strive to clear at least 5,000 cases per annum.
  - In most of the cases, templates can be followed for quick disposal.
  - Another prerequisite is the adequate staff which should be provided for.
  - Also payment of compensation for denial of information to the applicants is a quick and sure shot way of reducing litigation.

1.5. OFFICE-OF-PROFIT: EC ISSUES SHOW CAUSE NOTICE TO 27 AAP MLAS

- Petition, forwarded to the Commission by Rashtrapati Bhawan last month, had sought cancellation of membership of 27 AAP MLAs over the office of profit issue.
- The petitioner behind the plea claimed that the MLAs held posts of chairpersons of Rogi Kalyan Samitis (RKSs) of different government hospitals in Delhi “without any sanctity of law”.

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EC had earlier issued notice to 21 Delhi MLAs for allegedly holding an office of profit as parliamentary secretaries.

The Delhi government, in 2009, through its executive/ standing orders approved constituting Rogi Kalyan Samitis in all the hospitals with governing body under the chairmanship of local MLA in violating the mandate of scheme.

(Issue of Office of Profit is comprehensively covered in June 2016 issue of visionias current affairs magazine)

1.6. SPECIAL COMMITTEE FOR INTER-LINKING OF RIVERS

Why in news

- Union Cabinet has given its approval to the Status-cum-Progress Report and constitution of “Special Committee for Inter-Linking of Rivers” in compliance of Supreme Court judgment

Significance

- It will help in monitoring of the precious Inter-linking of River Projects to be carried out under National Perspective Plan 1980 of Government of India.
- Status-cum-Progress Report will be submitted bi-annually for information of Cabinet.
- In February 2012, the Supreme Court allowed interlinking of rivers with the condition that Special committee should be established for timely completion of feasibility reports and to ensure completion of projects on time.
- It is chaired by Union Minister for Water Resource, River Development and Ganga Rejuvenation. The Director General of National Water Development Agency is the Member Secretary of the Committee.

1.7. VOTER HAS RIGHT TO KNOW CANDIDATE’S QUALIFICATION: SC

Why in news

Recently Supreme Court has held that every voter has a fundamental right to know the educational qualification of a candidate.

Key facts

- The Manipur HC had declared as “void” the election of Mr. Prithviraj in the 2012 polls from the Moirang Assembly seat in Manipur. It was alleged that Mr. Prithviraj, in his nomination papers, had said he was an MBA, which was found to be incorrect.
- Any false declaration can warrant rejection of nomination papers.
- Right to vote would be meaningless unless the citizens are well informed about the antecedents of a candidate.
- According to the provisions of the Representation of the People Act 1951, Rules and Form 26 that there is a duty cast on the candidates to give correct information about their educational qualifications.
2. INTERNATIONAL RELATIONS

2.1. INDIA-UK

Why in news?
- UK’s PM Theresa May offered frequent registered traveller scheme for Indians travelling to Britain for business.
- The UK is also planning to restrict immigration through "work and study routes" which will have an impact on Indians being hired by British firms.

About the traveller Scheme
- Under the scheme, Indian nationals frequently visiting to the U.K. and contributing to growth in both countries will have a ‘significantly easier’ entry process including fewer forms to be filled, access to the EU-EEA passport controls, swifter passage through airports.
- It will give a boost to trade and investment in both the countries and strengthen ties between two nations.

About the Immigration Scheme

As per the proposal
- Immigration system will be re-looked if it provides the right incentives for businesses to invest in British workers.
- From December 2016, landlords renting out property to people with no right to be in the UK will be committing a criminal offence and could go to prison.
- Immigration checks will be a mandatory requirement for those wanting to get a licence to drive a taxi.
- From 2017, banks will have to do regular checks to ensure they are not providing essential banking services to illegal migrants.

Prospective impacts of the Immigration Scheme
- The tightened immigration will "ensure gaps in the UK’s labour market.
- The crackdown will affect students from India planning to study in the UK; their numbers are already at an all-time low.
- The move may make it difficult for British firms to hire from outside the EU, including countries like India.

Current UK’s Immigration scheme
- United Kingdom presents one of the toughest immigration regimes around the globe.
- Broadly, the U.K. visa statutes for immigrants have been classified into tier system - Tier-1 and 2.
- Tier 1 take care of the highly esteemed emigrants who can really contribute to U.K.’s economy.
- Tier 2 includes trained workers under different classes.
- Eligibilities are assessed on basis of point based evaluation of migrant profiles.
- It is mandatory to secure 95 marks in point assessment and 100 marks if migrant filing is under another qualified visa class.

2.2. INDIA-SRI LANKA: FISHERMEN ISSUE

Why in news?
- India and Sri Lanka have agreed to set up a Joint Working Group on Fisheries (JWG) and a hotline between their Coast Guards to address the long-standing issue of fishermen from Tamil Nadu being arrested.

Background
- The bone of contention between the two sides is the Palk bay, the 137 kilometers long and its breadth varies between 64 to 137 kilometers.
- An International Maritime Boundary Line (IMBL) separates five Indian and three Sri Lankan districts.
- Fishing is the economic mainstay of northern Sri Lanka. The Sri Lankan fishermen have been demanding their Indian counterparts to stop bottom-trawling that have been damaging the marine ecosystem.
Since 2014, Sri Lanka Navy has seized more than 100 fishing trawlers; while they have released the Indian fishermen, they refuse to release the trawlers.

The inconclusive talks among the fishermen representatives

- The Indian fishermen asked a three years phase out period. Under it, they should be allowed fishing for 83 days annually for next three years and then the fishermen will be withdrawn completely.
- The demand was rejected by the Sri Lankan fishermen who sought “compensation for the losses incurred” owing to the fishing by Tamil Nadu fishermen in “their waters”.

Pak Bay and associated issues

The Pak Bay has been providing rich fishing grounds for both the countries. However, multiple issues have compounded in recent decades to bring tensions in the region. These include-

2.2.1. ISSUE OF SOVEREIGNTY OF KACHCHATHEEVU

- The maritime boundary agreements of 1974 and 1976 delimited international boundaries in the Pak Bay and the Gulf of Mannar and Bay of Bengal, respectively. But on the ground the people concerned, namely fishermen, were not consulted.
- The island previously used to be under the Zamindari system of land tenure established by the British government. At the time of ceding, New Delhi did not consider Kachchatheevu to be part of India but rather a disputed territory.
- The government of India deemed the boundary agreement necessary to promote bilateral relations with Sri Lanka. There was strong opposition in Tamil Nadu which was brushed aside.
- The ongoing dispute has escalated tensions between those fishermen using traditional methods and those using mechanized methods, as well as increased the infringement of territorial boundaries.
- According to the government of Tamil Nadu, the sufferings of Indian Tamil fishermen is a direct consequence of ceding Kachchatheevu to Sri Lanka and sacrificing the traditional fishing rights enjoyed by Indian fishermen.
- According to the then foreign minister, Swaran Singh, though the island was ceded to Sri Lanka, the Indian fishermen continued to enjoy their traditional rights of fishing in and around Kachchatheevu.

2.3. CHINA

2.3.1. CHINA’S OBOR INITIATIVE

Why in news?

Latvia became the first country in the Baltic Sea area to sign a MoU to link up with China’s Belt and Road Initiative, during the visit by Premier Li Keqiang to the country.

India’s concerns

- OBOR project will have a connected mix of developed European countries along with bustling East Asian nations. India is concerned because many roads of the “belt” are inching towards India. For instance-
  - Pakistan economic corridor-connecting Kashgar in Xinjiang with Karachi and Gwadar on the Arabian coast. It will run across the mighty Karakorams and through PoK.
  - China is also extending its Tibet railway line from Lhasa to the Indian frontiers in the south.
  - Besides economic integration, OBOR showcase Chinese military might to the larger world.
  - China, through OBOR, can use sensitive corridors for its military mobilization.

About OBOR

- The initiative comprises of the Silk Road Economic Belt and 21 Century Maritime Silk Road.
- The initiative was proposed by President Xi Jinping in 2013.
- It aims to boost connectivity and trade across Asia, Africa and Europe. Three main goals of China are:
  - Economic diversification
  - political stability and the development of a multipolar global order
Pros of India joining OBOR

- The technical know-how the project will bring back could be used to develop or iron out issues facing technical bottlenecks.
- The OBOR initiative could be icing on the cake for India’s flagship programs like Digital India. The “Information Silk Route” has the telecom connectivity between the countries through fiber, trunk line and under-sea cables.
- This will expand the bandwidth capabilities for India significantly, without which offering e-Governance and delivering public services in an efficient manner will remain a pipe dream and a good marketing campaign.
- India will have excellent connectivity of various transport modes, and a great facilitator to Make In India initiative if India joins such global infrastructure project.

### 2.3.2. RCEP CONCERNS WRT CHINA

**Why in news?**

RCEP raised concerns recently over giving greater market access to Chinese goods without gaining in return from Chinese economy.

**What is the issue?**

- If China is given more market access it may dump items where it has excess capacity like steel, as well as highly subsidized items which may harm local industry of importing countries and distort trade.
- Also, by agreeing to eliminate tariffs altogether, the move will mainly help China.

**Earlier proposal by India**

- Earlier, India proposed a three-tier tariff reduction plan, depending on whether it has a free trade agreement with the member country or not.
- Under the plan, it proposed 80% tariff cuts to the 10 Asean countries, 65% to South Korea and Japan and 42.5% tariff liberalization to China, Australia and New Zealand, with which it does not have free trade agreements.
- However, under pressure from other members it agreed to provide similar tariff cuts to all RCEP member states with limited deviation at the Laos ministerial.

**Current Situation**

- India is pitching for simultaneous negotiations for liberalisation of trade in goods and services in the proposed RCEP agreement.
- India plans to raise its earlier offer of tariff elimination on 42.5% traded goods with China but well below what it would offer to other member countries.
- It also plans to stagger the phase-out of tariffs over a longer period in the case of China, to allow Indian industry more time to adjust.

### 2.3.3. CHINESE SHIP OPENS NEW TRADE ROUTE VIA PAKISTANI PORT

China opened a new international trade route from the newly built Gwadar port connecting Central Asia, South Asia and the Middle East by seeing off an export ship to Middle East and Africa.

**Why is this important?**

The Gwadar port is the showpiece of the China-Pakistan Economic Corridor (CPEC) project, which Beijing sees as a crucial link that will help it in its drive to become a world power.

**The Gwadar port**

- Gwadar is warm-water, deep-sea port on the Arabian Sea.
- **Strategic location**—it is located between South Asia, Central Asia and West Asia at the mouth of the Persian Gulf, just outside the Straits of Hormuz.
- It will also be the site of a floating liquefied natural gas facility as part of the larger $2.5 billion Iran–Pakistan gas pipeline project.
CPEC and Pakistan

- CPEC investments are expected to exceed all FDI in Pakistan since 1970.
- Over 7 lakh direct jobs likely to be created by CPEC in Pakistan.
- It will enhance the cooperation between China and Pak.
- Few Pak groups have expressed concern that Beijing could eventually use CPEC to boost its trade with India.

The Baloch angle

People in Balochistan, the Pakistani province in which Gwadar is located, are against the CPEC. They claim that the CPEC’s benefits will not flow to them.

CPEC and India

- India is unhappy with the CPEC as it passes through the Pakistan-Occupied Kashmir.
- Baloch activists have been reaching out to India in a hope to bring focus to their plight internationally.
- The China-Pak axis has already been creating waves and is concerning India.

About CPEC

The China-Pakistan Economic Corridor (CPEC) is a 3,218-km route consisting of highways, railways and pipelines that will connect Gwadar port to Xinjiang in China. The CPEC is crucial for China’s ‘One Belt, One Road’ initiative that aims to connect China to Europe and Asia.

2.4. INDIA-JAPAN

Why in news?

Prime Minister Modi recently visited Japan at the invitation of Prime Minister of Japan Abe. The two Prime Ministers held wide-ranging consultations.

Background

- India and Japan, motivated primarily by shared concerns about China, have been developing a closer defence partnership defined by regular maritime exercises and high-level political consultations.
- Amid growing competition between the United States and China in Asia, the often-overlooked relationship between two secondary powers – India and Japan – has quietly developed into a close security partnership over the past 16 years.

Outcomes of the visit

- **Synergising the partnership**-
  - Both countries undertook a comprehensive review of the Special Strategic and Global Partnership as outlined in the “India and Japan Vision 2025” and acknowledged the significant progress in bilateral relations over the past two years.
  - Enhanced space and cooperation on global challenges- such as climate change, countering terrorism and violent extremism, reform of the United Nations (UN) including the United Nations Security Council (UNSC), as well as maintaining rules-based international order.
Building stronger partnership for stable and safe world-
- **Emphasis on rising importance of Indo-Pacific region** - stressed the core values of democracy, peace, the rule of law, tolerance, and respect for the environment in realising pluralistic and inclusive growth of the region.
- **Consolidation of security and defence cooperation** - welcomed two Defence Framework Agreements concerning the Transfer of Defence Equipment and Technology and concerning Security Measures for the Protection of Classified Military Information.
- **Deepening bilateral security and defence dialogues**, through the “2+2” Dialogue, Defence Policy Dialogue, Military-to-Military Talks and Coast Guard-to-Coast Guard co-operation.

Partnership for prosperity-
- **A dedicated task force** to be set up comprising representatives of both countries to develop a concrete roadmap for phased transfer of technology and “Make in India.”
- **Cooperation on the human resource development** in the manufacturing sector in India through “Manufacturing Skill Transfer Promotion Programme.”
- The two Prime Ministers noted the growing collaboration between India and Japan in the modernisation and expansion of conventional railway system in India.
- To build upon **cooperation in the field of smart cities** to develop smart islands by initiating consultations to identify technologies, infrastructure, development strategies and management processes facilitating development of smart islands in an efficient and effective manner.

Cooperation for a cleaner and greener future-
- Recognised the importance of access to reliable, clean and affordable energy and welcomed the Japan-India Energy Partnership Initiative laid by the Japan-India 8th Energy Dialogue held in January 2016.
- Commitment to work together in developing the rules for successful implementation of the Paris Agreement on Climate change.
- Signed the Agreement for Cooperation in the Peaceful Uses of Nuclear Energy which reflects a new level of mutual confidence and strategic partnership in the cause of clean energy, economic development and a peaceful and secure world.

Foundation of a Future-oriented Partnership- Both the countries signed the following MoUs-
- MOU between JAXA and ISRO concerning Cooperation in the Field of Outer Space
- MoU between Ministry of Earth Sciences (MoES), Republic of India and The Japan Agency for Marine-Earth Science and Technology (JAMSTEC) on Mutual Collaboration in Marine and Earth Science and Technology.
  - Will advance of academic research in the field of Earth Sciences for the benefit of the peace and human welfare.
  - Will enhance capability in the field of atmospheric and climate research, ocean technology observation and hazard mitigation in case of tsunami, earthquakes and other phenomenon.
  - Will boost our “Blue Economy” with better research and exploration of marine resources.
  - Will give much needed exposure to Indian scientists by sharing of mutual experiences.
- MoU between National Investment and Infrastructure Fund Limited and Japan Overseas Infrastructure Investment Corporation for Transport and Urban Development
- MoU between Textiles Committee, Ministry of Textiles, GoI and Japan Textiles Products Quality and Technology Centre (QTEC) in the Field of Textiles

Investing in people for durable partnership by enhancing people to people contacts and in other areas of cooperation. Both countries signed following Memorandum of Cooperation(MoC)-
- MOC between the Ministry of Skill Development & Entrepreneurship of India, Government of India and Ministry of Economy, Trade and Industry of Japan, Government of Japan on the Manufacturing Skill Transfer Promotion Program
- MoC between the Ministry of Agriculture and Farmers Welfare, Government of India and Ministry of Agriculture, Forestry and Fisheries of Japan in the Field of Agriculture and Food Related Industry
- MOC in the Field of Cultural Exchange between the Ministry of Culture, Government of India and the Ministry of Education, Culture, Sports, Science and Technology, Government of Japan
2.4.1. INDO-JAPAN NUCLEAR DEAL

Significance

- The Agreement is a crucial determining factor as the US-based reactor vendors, as well as other global nuclear reactor manufacturers have alliances with Japanese companies and source the most critical equipment in a reactor — the calandria or reactor vessel — from Japanese heavy forging major Japan Steel Works (JSW). Now, after agreement India has direct agreement for Cooperation in Peaceful Uses of Nuclear Energy with Japan.
- The pact is a major achievement for India as it is Japan’s first civilian nuclear cooperation pact with a country that has not signed the nuclear Non-Proliferation Treaty. The negotiations began in June 2010.
- The deal took many years because India was reluctant to limit its option to carry out more atomic weapons’ tests in case the need arose. And Japan was uncomfortable with India having a nuclear weapons programme outside the nuclear non-proliferation regime.
- The agreement confirms India’s position in front of the world as a responsible nuclear nation which uses nuclear energy peacefully.
- The pact is in line with Japan’s ambition to create a world without nuclear weapons.
- The Indo-Japan nuclear pact is crucial for energy-starved India to access sensitive technologies to generate clean electricity.
- It will give a concerted push for solar and wind energy capacities along with the nuclear energy in the nation.
- It will boost India’s strategy to pursue a low-carbon growth model in decades to come. It was formally enunciated in the Intended Nationally Determined Contribution announced at COP-21 in Paris late last year and ratified by the government on October 2, 2016.

2.5. INDIA-THAILAND-MYANMAR FRIENDSHIP MOTOR CAR RALLY

India flagged off a Friendship Motor Car Rally from India Gate lawns in Delhi to Bangkok.

Significance of the rally

- It will play an important role in developing the economic, transport and cultural relations between the three countries and will improve our relationship with our neighbouring countries.
- It will give a boost to the PM Modi’s ‘Act East Policy’.
- It will highlight the potential benefits of connectivity and integration in the region.

About IMT trilateral Highway

- The India–Myanmar–Thailand Trilateral Highway is an ambitious project of 1990 miles (3200 km) that will connect India with the ASEAN region.
- The highway will link Moreh in Manipur state (India), via Mandalay city (Myanmar) and to Mae Sot district (Thailand).
- It is a part of India’s upgraded “Act East” policy, which seeks to strategically build India’s link with the Southeast Asian region.
- Bangladesh has also been showing interest in joining the IMT highway through BIMSTEC.

2.6. INDIA-ISRAEL

Why in news?

- Israeli President, Reuven Rivlin, was in India on a six-day visit to India.
- Political sensitivity over India’s longstanding ties with Palestine had forced successive governments to keep the ties low-key.
Significance of the visit

- Rivlin is the first Israeli head of state to visit India in nearly 20 years. The last Israeli president to visit India was Ezer Weizman, in January 1997. The visit comes after President Pranab Mukherjee’s Israel trip in 2015.
- Rivlin’s visit marks 25 years of formal diplomatic ties with Israel set in motion by the PV Narasimha Rao government in 1992.

Importance of Israel for India

- Israel has emerged as a key partner for India in the spheres of security and defence.
- In agriculture, India has benefited from Israeli expertise and technologies in horticulture mechanization, protected cultivation, orchard and canopy management, nursery management, micro-irrigation and post-harvest management particularly in Haryana and Maharashtra. Israeli drip irrigation technologies and products are now widely used in India.
- Political relations between both the countries are friendly and in recent years, ties have expanded to areas such as science and technology, education and homeland security.
- Bilateral merchandise strengthened between the two countries from 1992-2011. It has stagnated around $4.5 billion.
- Major exports from India to Israel include precious stones and metals, chemical products, textiles and textile articles, plants and vegetable products, and mineral products. Major imports by India from Israel include precious stones and metals, chemicals (mainly potash) and mineral products, base metals and machinery and transport equipment.

2.7. RUSSIA QUITS ICC

Why in news?

- Russia formally withdrew its signature from the founding statute of the international criminal court in the backdrop of court publishing report recognising the annexation of Crimea as a military conflict between Russia and Ukraine and classified it as an occupation.
- Burundi, South Africa and Gambia have quit ICC have already quit ICC last month.

Issue

- Reasons cited by Russian foreign ministry: The tribunal failed to live up to hopes of the international community and denounced its work as “one-sided and inefficient.
- Russia insisted that Crimea voluntarily joined Russia after a referendum, but international observers has the opinion that the referendum was hastily organised, did not meet international standards, and was conducted as Russian troops swept through the peninsula.

(ICC has been comprehensively covered in October issue-2016)
3. ECONOMY

3.1. DEMONETISATION OF 500 AND 1000 RS NOTES

Why in news?
The PM of India has announced that the 500 and 1000 Rs notes will no longer be a legal tender.

Background
Initially there were certain clues on the breaking of black money momentum, this can be seen when:

✓ **Black Money and Imposition of Tax Act 2015**, came into force, where the disclosure of foreign black money within three months by paying 60% tax was passed.
✓ Also under **the Income Deceleration Scheme implemented earlier in 2016**, the citizens were allowed to declare their undisclosed income and pay the tax, surcharge and penalty amounting to 45% of the declared income.
✓ And, there was a huge roll out of the **Pradhan Mantri Jan Dhan Yojana**, whereby access to back was made feasible.

Benefits by the move
- To ensure cashless transactions.
- The Income Tax department will be benefited with the move, as there will be more specific data gathered in the process which could help in catching the defaulters.
- A parallel black economy would collapse.
- Will increase opportunities by making the real estate and higher education reachable to the middle class.
- Business will be more organized and accounted.
- It will help to improve the money transmission and reduce the lending rates.
- Will put a stop to the neighbouring countries drug cartels and terrorists of supplying high value currency into India.

Challenges
- More than half of the population does not have access to banking facility which will cause inconvenience to the common man.
- By replacing all the Rs.500 and Rs.1000 denomination notes, as ordered by the government, could cost the RBI at least Rs.12000 crore.
- The major problem is the big players, who could go scot-free.

The way forward
- As we are heading towards cashless economy, we should also keep in mind the cyber-crime and remedial measure must be taken.
- There need to be more customer-bank awareness and interaction on topics dealing with e-transactions.
- All the political parties must come in consensus to get the maximum output of demonetisation.
- The RBI need to issue directives to the banks in regard to customer awareness.

It is said that the decision to Demonetise Rs 1,000 and Rs 500 notes was particularly well-timed as India has become the bright spot in the global economy.
3.2. EASE OF DOING BUSINESS RANKING AMONG STATES

**Background**

- The Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry had given out a 340-point Business Reform Action Plan (BRAP) for States/UTs earlier this year.
- The BRAP included recommendations for reforms on 58 regulatory processes, policies, practices or procedures spread across 10 reform areas spanning the lifecycle of a typical business.
- The DIPP, in partnership with World Bank has studied the extent to which states have implemented the BRAP.
- This study was recently released in its Assessment of State Implementation of Business Reforms 2015-16.

**Key Findings**

- The rankings of states have changed considerably (See Table)
- Andhra Pradesh and Telangana have jointly topped the rankings.
- Major progress was made by states like Telangana, Haryana, and Uttarakhand.
- While 12 states were ranked as leaders with 90-100% implementation record, 17 states and union territories, including Kerala, Goa and most north-eastern states, were ranked as laggards that need “jump-start” with 0-40% implementation record.
- The national implementation average has improved from 32% to 48.93%.

**Significance**

- The reordering of the ranking signals that competitive federalism is rapidly taking root as states move swiftly to showcase themselves as ideal investment destinations.
- The rankings show greater acceptance of reform measures and seriousness about it among the states. For example, previously, only seven states implemented more than 50% of the reforms proposed as against 17 this year. Further, last year, not a single state implemented more than 75% of reforms. But 16 states implemented more than 75% this year.
- The study highlights the weakness in the World Bank’s methodology of measurement of Ease of Doing Business Index which is concentrated only on two cities- Delhi and Mumbai. India’s marginal improvement of only one place in this Index is attributed to this limitation as major reforms taken by Indian states have been ignored.
- It celebrates the achievements of the states and underscores the steps taken by them which could be emulated by others.

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**WHERE THEY STAND**

<table>
<thead>
<tr>
<th>Rank 2016</th>
<th>Rank 2016</th>
<th>Score (in %)</th>
</tr>
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<tbody>
<tr>
<td>Telangana, Haryana and Uttarakhand</td>
<td>2 1 3</td>
<td>Andhra Pradesh 98.78</td>
</tr>
<tr>
<td></td>
<td>13 1 4</td>
<td>Telangana 98.78</td>
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<tr>
<td></td>
<td>3 4 5</td>
<td>Gujarat 98.21</td>
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<td>5 5 6</td>
<td>Madhya Pradesh 97.01</td>
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<td></td>
<td>14 6 7</td>
<td>Haryana 96.95</td>
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<tr>
<td></td>
<td>3 7 8</td>
<td>Jharkhand 96.57</td>
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<tr>
<td></td>
<td>6 8 9</td>
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<td></td>
<td>23 9 10</td>
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</tr>
<tr>
<td></td>
<td>8 10 11</td>
<td>Maharashtra 92.86</td>
</tr>
</tbody>
</table>

**Background**

- India is the largest producer, consumer and importer of pulses.
- Arhar or pigeon pea is one of the most widely consumed pulses in India.
- The price of Arhar shot up to Rs. 200/kg in 2015 due to inadequate production. This also led to surge in imports.

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3.3. PUSA ARHAR 16 TO BRIDGE THE DEMAND-SUPPLY GAP

**Why in News?**

- A high yielding pigeon pea variant, Pusa Arhar 16 has been developed by scientists at the Indian Agricultural Research Institute (IARI).
- The new variety is expected to be rolled out commercially for production in January 2017.
- This variety having lesser maturity period could be a game changer for inflation-wary policymakers and consumers alike.
Benefits
- The new variety has a maturity period of 120 days instead of 160-270 days needed by varieties in use now.
- It also needs less water and is suitable for mechanized harvesting.
- Despite the fact that the new variety is dwarf (95cm to 120cm) as compared to the prevalent varieties (which are 2 metres of plant height), it gives the same 20 quintals/hectares yield. The high yields result from high density planting.
- In traditional varieties the flowers do not set pods at the same time while in Pusa Arhar 16, there is synchronous maturity making it easier for harvesting.
- It is suitable both for intensive cultivation such as in Punjab as well as rain-fed areas of central India.
- The new variety can help India achieve self-sufficiency in pulses in the next 2-3 years.
- Adequate production can help bridge the demand–supply gap and be a sigh of relief for inflation wary policymakers.

3.4. WORLD BANK’S “EASE OF LIVING” INDEX

Why in News?
- World Bank is all set to rank cities globally on a “ease of living” index.
- This news comes at a time when the World Bank is planning to tweak the “ease of doing business” index.

What is it?
- The index is being launched keeping in mind that as cities grow and expand, the ease of living becomes an important parameter.
- The index could include categories on social inclusion, cost of living, public transport, housing, education, health, environment-friendliness, crime/safety, governance and corruption.

Where India Stands Now?
- India was ranked a lowly 130 on the “ease of doing business” index 2016.
- India has recommended the World Bank that reforms undertaken in the entire country and not just in Delhi and Mumbai be considered for the “Ease of Doing Business” Index.
- The Ease of Doing business index measures how easy it is to setup new business in a particular country depending on different parameters such as getting a licence, infrastructure, govt. policy and so on.

3.5. SEBI TIGHTENS NORMS FOR CREDIT RATING COMPANIES

Why in News?
- SEBI (Securities and Exchange Board of India) tightened disclosure norms for credit rating agencies.
- This has been announced in lieu with the sudden downgrades and rate cuts in the recent past.

What is it?
- SEBI has asked credit rating agencies to disclose the basis on which they rate companies, rating history as well as the responsibilities of the analysts.
- The criteria to judge companies would include criteria for analysing financial ratios, treatment of consolidation of firms, parent’s group support, and nature of business.
- The rating process has to be reviewed periodically.
- Any change in the rating process has to be disclosed publically along with the original provision.
- Any rating agency must not stop rating a company abruptly. If the issuer does not co-operate then the rating agency must continue with the data available in public domain.
- **Significance of** this move by SEBI can help bring transparency in rating process. And it will curb rate shopping and rating suspension.
3.6. ENTIRE COUNTRY UNDER NATIONAL FOOD SECURITY ACT

Why in News?
- The Centre notified that the entire country has now come under the umbrella of National Food Security Act with Kerala and Tamil Nadu joining the bandwagon.
- With this move, now 81.34 crore people will get wheat at Rs. 2/kg and rice at Rs. 3/kg.

Background
- The National Food Security Act was enacted in 2013 with the aim to provide adequate quantity of quality food at affordable prices to the people.
- The act provides food security by offering essential grains and cereals at rock bottom prices of Rs. 1, Rs. 2 and Rs. 3.
- The public distribution system forms the most essential part of the implementation of this act.
- There are two types of beneficiaries under the PDS: AAY (Antodya Ana Yojana, launched in 2000) and priority households.
- Every AAY household is entitled to get 35 kg of food grains every month while priority households (BPL families) are entitled to get five kg per person of food grains every month.

3.7. FOUR-LEVEL GST RATE STRUCTURE

Why in News?
- GST Council has reached a consensus and has finalised four different GST tax slabs of 5, 12, 18 and 28 percent.
- GST laws are to be finalised in this winter session of the Parliament.

Major Takeaways
- Most of the common consumption items and food grains have been placed under zero tax rate thereby insulating the people from inflationary pressure.
- There are two standard rates of 12 and 18 percent which would include bulk of goods and services. This also includes fast-moving consumer goods (FMCGs).
- Services are most likely to get dearer as the one being taxed at 15 percent is expected to be put under the 18 percent slab.
- White goods shall be taxed at 28 percent. These include washing machines, refrigerators, and LED TV sets.
- Demerit and sin goods such as luxury cars, tobacco and aerated drinks will also be taxed at 28 percent. These goods will also attract cess for 5 years on top of 28 percent tax.
- The cess thus collected along with the clean energy cess would be used to compensate the states for the losses arising out of transitioning to GST.
- The cess would be charged such that the incidence of tax is not more than the existing 40-65 percent being charged now. (tobacco is taxed at 65 percent).
- Tax rate on gold hasn’t been decided as of yet.

Positives
- Consensus on GST tax rate between the centre and states is the first major step towards making its rollout possible by 1 April 2017.
- The four-slab tax bracket is far from the one nation, one tax regime. However, keeping in mind the diversity of the nation, it is being considered as the first step towards a single rate structure.
• Tax rates have been decided such that the common man is least affected.
• Exempting common consumption items from taxation also ensures that the GST rollout would not affect work done to curb CPI inflation in the past 2-3 years.
• Tax compliance will increase since every transaction will be recorded at each stage by the GST infrastructure.

**Criticism/ Challenges**

• The multiple-tier tax regime is likely to create a complex tax structure, something which India was trying to get away from through GST.
• Several registrations will be needed in each state making manufacturing and trade difficult.
• One of the major challenges in front of the govt. is the classification of different goods under different tax brackets.
• There is also no clarity whether a nominal GST would be levied on the five petroleum products (i.e crude oil, natural gas, petrol, diesel and ATF).
• Similarly, there is no clarity on GST rates for under construction properties or abatement on land.

*Please refer to August 2016 Current Affairs booklet to know more about GST.*

### 3.8. KG BASIN ISSUE: GOVERNMENT IMPOSES FINE ON RIL

**Why in News?**

• Government has sought USD 1.55 billion from Reliance Industries and its partners: BP Plc. and Niko Resources Ltd. for extracting gas belonging to ONGC from the Krishna-Godavari Basin in the past seven years.

**Background**

• ONGC claimed that between 1 April 2009 and 31 March 2015, 11 billion cubic metres of gas flowed from ONGC’s field to RIL’s adjacent field.
• This claimed was made citing the report by US-based consultancy firm, DeGolyer and MacNaughton (D&M). D&M was jointly hired by RIL and ONGC.
• A committee was appointed under Justice A P Shah to look into the matter.
• The committee commented that RIL must pay the government for the gas it has drawn from an adjacent block from the KG basin in the past seven years.
• The panel also said that the compensation must be paid to the government and not to ONGC since ONGC has no an ownership right or possessory interest in natural gas.

**What is Cess?**

• Cess is a type of tax that levied to fulfil a specific purpose.
• The cesses collected do not go to the Consolidated Fund of India unlike the other taxes.
• Funds from CFI can be used for any legitimate activity while a cess can only be used for the purpose it is charged for.

**Capital-at Charge:** Capital-at-charge represents the Central Government’s investment in the Railways by way of Loan Capital and value of the assets created therefrom.

### 3.9. GLOBAL MICROSCOPE REPORT 2016.

**Why in News?**

• India has been ranked third by the Global Microscope Report 2016.
• The report assesses regulatory environment for financial inclusion across 12 different indicators and 55 countries.

**Background**

• India has fared well in financial inclusion thanks to the steps taken in the past 10 years to modernize the financial sector.
• One of the major catalysts for financial inclusion recently has been the Pradhan Mantri Jan Dhan Yojana.
• The scheme helped open 100 million accounts for low incomes families in 2014 alone. This was assisted by the Aadhaar, national biometric identification programme. Total no. of accounts opened under the scheme reached 221 million by April 2016.
• With the launch of UPI (Unique Payment Interface), RBI hopes to strengthen the payment system and digitize it as well.

3.10. LOGISTIC EFFICIENCY ENHANCEMENT PROGRAMME

Why in News?
• The National Highway Authority of India has undertaken Detailed Project Reports (DPRs-survey) to critically examine the existing logistics infrastructure and destination of freight movement in the country under LEEP.
• This is done so as to reduce cost and time of freight movement across 44 different freight corridors (economic corridors), inter corridors and feeder routes.

What is it?
• LEEP stands for Logistics Efficiency Enhancement Programme which aims to enhance the freight transportation in India through improving cost, time, tracking and transferability of consignments through infrastructure, procedural and Information Technology (IT) interventions.
• The programme has been undertaken under Bharat Pariyojana
• In the first phase, DPRs of 15000 km is to be prepared.
• In order to reduce the time of surveys, it has decided to use latest technologies such as LiDAR, Satellite mapping and Ground Penetration Radar (GPRs).

3.11. PRADHAN MANTRI YUVA YOJANA

Why in News?
• Ministry of Skill Development and Entrepreneurship launched the Pradhan Mantri YUVA Yojana, its flagship scheme for entrepreneurship training and education at the Ministry’s second foundation day.

What is it?
• The scheme spans over five years (2016-17 to 2020-21) with a project cost of Rs. 499.94 crore.
• It will provide entrepreneurship education and training to over 7 lakh students in 5 years through 3050 Institutes.
• The scheme will also include easy access to information, mentor network, credit, incubator, accelerator and advocacy to create a pathway for the youth.
• The institutes under the PM’s YUVA Yojana include 2200 Institutes of Higher Learning (colleges, universities, and premier institutes), 300 schools, 500 ITIs and 50 Entrepreneurship Development Centres, through Massive Open Online Courses (MOOCs).

Other Initiatives of MSDE
• The ministry has plans to disburse around Rs.7000 crore to states to help align them with the Centre’s skill development agenda.
• The ministry has allocated around 3000 crore of 25% from the funds earmarked for the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) to the States, to achieve its target of training 10 million people over 4 years.
4. SECURITY

4.1. INDIA TAKES STEPS TO BOOST CYBER SECURITY

Why in news?
- The Central government recently announced some measures, to strengthen cyber security in India.

What are the proposed measures?
- All organizations having a significant IT infrastructure will need to appoint cyber security officers.
- Efforts are being made to strengthen “Cert-IN”.
- State Certs in Maharashtra, Tamil Nadu, Telangana, Kerala and Jharkhand are being planned.
- Three new sectoral Certs in power sector -- generation, transmission and distribution, have been set up, in addition to the banking one.
- A National cyber coordination center is being set up to provide near real time situational awareness and rapid response to be completed in 5 years.

4.2. AVIATION SECURITY

Why in news?
- Government has taken steps to upgrade aviation security, where passengers’ travel and booking history will be tracked.
- The measures have been taken after a series of blasts occurred at airports in Turkey and Belgium recently.

Key features
- Under this passenger profiling system, potential troublemakers will come under the scanner of aviation security authorities the moment their tickets are booked unlike in US where they are screened 24 hours before flight.
- Air travel data will be tracked and a criminal check will be run to see whether a passenger’s name is in the terror blacklist.
- Profiling will not be based on religion, caste or creed. But on ticket booking history to check whether the pattern of travel is suspicious or not.

4.3. BLACKLISTING POLICY FOR TAINTED DEFENCE DEALS APPROVED

Why in news?
- The Defence Acquisition Council (DAC) approved the long- pending policy for blacklisting firms involved in corruption in arms purchases.

What are the key takeaways of the new policy?
- The details of the blacklisting policy will be made public soon.
- Instead of blanket blacklisting of firms involved in corrupt practices, heavy fines could be imposed with banning as the last resort, as it had begun to hurt defence preparedness recently.
- The DAC, headed by the Defence Minister, also accorded approval to begin the procurement process for fighter jets, tanks and attack helicopters cumulatively worth over Rs. 82,000 crores, all produced domestically.
4.4. CENTRE EXTENDS AFSPA TO ARUNACHAL PRADESH

Why in news?
- The Centre has decided to extend the Armed Forces Special Powers Act (AFSPA) in three districts of Arunachal Pradesh.

Why this step in the peaceful state of Arunachal Pradesh?
- The main reason as per the Centre is violence and intimidation resorted to by the National Socialist Council of Nagaland (Isak-Muivah), to dominate areas under the NSCN (Khaplang).
- This comes after the NDA government had signed a ‘framework agreement’ with NSCN-IM in September 2015 to find a final solution to the six-decade-old Naga issue.
- AFSPA was being extended in the districts of Tirap, Changlang and Longding, all bordering Assam, as these districts were being declared as “disturbed area” under Section 3 of the AFSPA.
- The NSCN-IM was desperate to regain control from the NSCN-K, which was banned last year after its alleged involvement in an ambush on an Army convoy in Manipur’s Chandel district.
- The NSCN-IM, is the largest group representing the Nagas demands a “Greater Nagalim” or a contiguous land for the Nagas, across the States of Nagaland, Arunachal Pradesh, Manipur.
- As per the Centre, the ceasefire signed with NSCN-IM, in 1997 is only for Nagaland; excluding Arunachal Pradesh and Manipur.

4.5. TERROR FINANCING AND DEMONETISATION

Why in news?
- The Centre had declared that all currency notes of 500 or 1000 denominations ceased to be legal tenders from 8th November midnight.

How will it affect terror financing?
- The government targeted the fake currency notes in circulation which were an important source of terror financing, though an accurate number of such fake notes has only been a subject of speculation.
- As per a study done by the Indian Statistical Institute, Kolkata, in 2015 on behalf of the National Investigation Agency (NIA), Rs. 400 crore worth fake notes were in circulation in the economy which is merely 0.025 per cent of the total budget outlay of Rs. 19.7 lakh crore as announced this fiscal.
- As per the study Rs. 70 crore fake notes were pumped into the economy every year.
- The problem with the fake notes is that it is difficult to identify and count such notes in open market as they can be detected only when they enter the banking system.
- In 90% cases, the fake notes were printed in Pakistan and reached Bangladesh via any route, before being pumped into India through smugglers.
- With the raw currency, the ink and the silver thread, all being sourced from the same source by both India and Pakistan, some of the security features of the old notes had been compromised.
- The new notes will however be difficult to be faked as they have advanced safety features.
- Apart from this, the demonetization has given a body blow to the hawala racket which supplied loads of cash to terrorists based in J&K for their day to day operations.

4.6. MILITARY EXERCISES

4.6.1. INDIA CHINA
- An opening ceremony of the sixth India China Joint Training Exercise “Hand – in – Hand 2016” was held at the parade ground in Aundh Military Camp, Pune today.
- The aim of the joint exercise is to acquaint both the Armies with each other’s operating procedures in the backdrop of counter terrorism environment and enhancing confidence and trust between the two armies in case they are called upon into joint anti-terrorism operations under the UN mandate.
- A spectacular display of Indian martial arts of Kalyaripattu, Khukri dance and Malkhamb by soldiers of Indian Army and a massed martial arts display by the Chinese contingent will also be there.
- The joint training will also help in upholding the values of Peace, Prosperity and Stability in the region.

### 4.6.2. INDIA-BANGLADESH

- The Sixth India-Bangladesh Joint Military Exercise “SAMPRITI-2016” commenced at Bangabandhu Senanibas, Tangail recently.
- Main focus was on Counter-Terrorism Operations in mountainous and jungle terrain under the United Nations Mandate.
- SAMPRITI series of bilateral exercises is one of the major bilateral defence cooperation initiatives between India and Bangladesh.

### 4.6.3. INDIA-NEPAL

- Indo-Nepal Joint Military Exercise Surya Kiran-X commenced at Army Battle School, Saljhandi, Nepal. It was the tenth in the series of such exercise between the two nations.
- The Surya Kiran series of Exercises are being conducted annually, alternatively in Nepal and India.
- In the series of military training exercises undertaken by India with various countries, Surya Kiran series with Nepal is the largest in terms of troop’s participation.

### 4.6.4. INDIA-SRI LANKA

- The focus was on enhancing inter-operability while carrying out Counter Insurgency (CI) and Counter Terrorism (CT) operations under a UN mandate.

**Significance of Military exercises**

- The joint Military exercises provide an opportunity to the involved armies for greater cultural understanding, sharing mutual experiences and strengthening mutual trust and co-operation.
- These enhance defence co-operation and relations between the two nations.
- These are considered as the step towards taking traditional friendship between the nations to greater heights.
5. ENVIRONMENT

5.1. MISSION ELECTRIFICATION

About
- It is an initiative of the Railway Ministry to reduce dependence on diesel by electrifying nearly 90% of railway tracks in the next five years.
- The Indian Railways will now set targets for ourselves to complete the electrification in a time-bound manner. It aims to speed up the present average rate of electrification of 1,700 route kilometers per year by doubling it next year.
- A mobile application called Rail Saver was also launched to enable railway officials to keep a track of energy consumption and trends.
- The government has tied up with PSUs for increasing the pace of route electrification and also with Ministry of Science of Technology for developing and utilizing renewable energy technologies.

Significance
- The largest component of greenhouse emission comes from transportation after power generation. Hence transportation will play a key role in reducing the ill effects of such emissions.
- Indian Railways consumes 2% of the country’s total power generation. The power could be effectively utilized in other sectors.
- This would also make the travel through Railways faster.
- This will help in reducing the energy bill of railways considerably. Railways’ expenditure on energy is second highest after salaries and pensions. It expects to reduce fuel bill by Rs 10,000 crore annually through electrification of major routes.

5.2. LOKTAK LAKE

Why in News
- The MoEF has recently constituted a four-member team for conservation and management of the Loktak Lake.
- The team will review the implementation of various work carried out with financial assistance provided by the central and state governments so far for the conservation and management of the Lake. It will also suggest further interventions required for conserving the lake in a holistic manner.

About
- Loktak Lake is the largest freshwater lake in Northeast India located in Manipur.
- It is famous for the phumdis which is heterogeneous mass of vegetation, soil, and organic matter at various stages of decomposition floating over it.
- Keibul Lamjao is the only floating national park in the world. It is located near Moirang in Manipur state, India.
- The Keibul Lamjao National Park is the last natural refuge of the endangered Sangai deer.
- Human activity has led to severe pressure on the lake ecosystem.

5.3. NEW POLICY INITIATIVES IN URBAN TRANSPORT

About
- The central government working on new policy initiatives in public transport systems like metro rail, non-motorised transport and other low carbon emitting systems in urban areas.
- The new initiatives under consideration include green urban transport scheme (GUTS), new metro rail policy, revision of metro Acts and standardisation and indigenisation of metro systems, aimed at increased private sector participation.
Guts

- Under GUTS, provision of non-motorised transport infrastructure, increasing access to public transport, use of clean technologies, adoption of intelligent transport systems (ITS) and private sector participation in urban transport projects will be increased.

Metro Policy

- The government is also working on a new Metro Policy which would mandate preparation of comprehensive mobility plans of cities to ensure last mile connectivity with metro stations besides bringing in more innovative models of implementation.
- The present Metro Acts in Delhi and Kolkata will be integrated envisaging more delegation of powers to State Governments besides promoting PPP and private initiatives.
- State governments would also be encouraged to form Unified Metropolitan Transport Authority to facilitate coordinated planning and implementation of projects relating to urban transport and integrated management.

Non-Motorised Transport

- The policy will also promote Non-motorised transport (NMT) infrastructure for encouraging walking and cycling.
- NMT as a viable alternative mode of mobility would be effective if there is a close relationship between work and living place and this would require proper land use zoning, development control and building regulations to ensure success of public transport system in cities.
- NMT is already being encouraged under the Smart Cities and AMRUT mission.

Significance

- The government wants the new urban transport planning to be people centric aiming at moving people instead of moving cars. It would ensure that all sections of people have access to efficient public transport through inclusive planning.
- One of the major drawbacks of the Smart City programme was that there was no focus on mobility. The new policy would help in meeting this gap.
- Another positive aspect would be that it will ask cities to submit plans on mobility and will rate them on service quality indicators.

UPSC in Past
Mains 2014

Q. National urban transport policy emphasizes on moving people instead of moving vehicles. Discuss critically the success of various strategies of the government in this regard. (200 words)

5.4. DELHI DECLARATION ON AGROBIODIVERSITY MANAGEMENT

About

- The first International Agrobiodiversity Congress (IAC) held in New Delhi has adopted New Delhi Declaration on Agrobiodiversity Management.
- In the declaration, 900 participants from 60 countries have urged researchers and policy-makers to strengthen and promote complementary conservation strategies to conserve and use agrobiodiversity.

Major Highlights

- The Congress addressed seven themes:
  ✓ agrobiodiversity for food and nutrition;
  ✓ agrobiodiversity for adaptation to climate change;
  ✓ intellectual property rights (IPRs) and access and benefit-sharing (ABS) and farmers’ rights;
  ✓ quarantine, biosafety and biosecurity issues;
  ✓ conservation strategies and methodologies;
  ✓ science-led innovation for agrobiodiversity management and sustainable use; and
  ✓ capacity-building and strengthening partnerships.
5.5. MARRAKESH COP

Background
- in the latest CoP of the UNFCCC held at Marrakesh, Morocco more than 190 countries negotiated to prepare the fine print for Paris deal. It sought to make the rules that would help in the implementation of the law i.e. Paris Agreement.
- The countries have agreed to complete the rule book by 2018 as the Agreement would come into force from 2020.

Concerns
Differences between the developed and developing countries persisted over crucial issues pertaining to climate finance, adaptation funds and scaling up reduction in emissions of greenhouse gases.
- The developed countries, led by USA from the front, tried to use the rule-making process to subvert the Paris agreement.
- The developed countries were successful in getting their OECD report on climate finance acknowledged into the formal negotiations, despite developing countries claiming that it had used dubious accounting methods. This OECD report could now become one of the bases for defining climate finance.
- Principles of equity and differentiated responsibilities remain on table but no progress on operationalizing them in the Paris Agreement rulebook.
- The road map for rich countries to provide US $100 billion annually starting 2020 looks more dubious than before.
- No space for deeper emission reductions or increased climate finance by rich countries before 2020.
- The replenishment of funds for adapting to climate change though, was one of positive developments from the Marrakesh conference. There was a demand for replenishing the adaptation fund under the Paris agreement and that was done with $80 million. However, discussion over it will continue in the next CoP.
- The issue of providing loss and damage finance to vulnerable countries also will be taken up next year.
- India’s call for ‘Climate Justice’ finds no placeholder. India unable to find even a rhetorical entry for ‘lifestyle issues’ at Marrakech.

5.6. ‘CLEAR THE AIR FOR CHILDREN’: UNICEF STUDY

About
- The UNICEF recently concluded a study called ‘Clear the Air for Children’.
- In the study which is based on satellite imagery it has categorised the affected areas based on the quantum of particulate matter, ranging from 10 to 60 µg/m3.

Major findings
- Two-hundred and twenty million children in South Asia region including India, among nearly 300 million globally, currently live in areas where outdoor air pollution exceeds international guidelines by at least six times.
- Many of these children are already disadvantaged by poverty and deprivation. Some are already at heightened risk from conflicts, crises and the intensifying effects of climate change.
- Globally, air pollution affects children in low-income and middle-income countries more.

Impact
- The impact of such high level of pollution is commensurately shocking. Every year, nearly 600,000 children under the age of five die from diseases caused or exacerbated by the effects of indoor and outdoor air pollution.
- Millions more suffer from respiratory diseases that diminish their resilience and affect their physical and cognitive development.
- The effects of indoor air pollution kill more children globally than outdoor air pollution, especially in Africa and Asia where the use of solid fuels for cooking is prevalent.
• Chronic exposure to high pollution increases risk of miscarriage and early labor in pregnant women, and low birth weight.

Some suggestions by the Report
• It emphasised that nations need stronger measures to cut back on the sources of air pollution, which cannot be contained within borders and spreads across regions.
• Air pollution moves across borders, both national ones as well as sub-national ones, and so coherent government policies are needed to address these trans-boundary risks.
• At a global scale, better monitoring of air pollution is required.
• Public investment in healthcare for the children is required to make them more resilient against such new risks.

5.7. EMISSIONS GAP RISING

Why in News
• A recent UN Environment Programme Report reveals that global emissions have continued to rise despite some signs of emissions from fossil fuels and industries stabilizing.
• The emissions gap for 2030 is 12 to 14 GtCO2e (Giga tonne CO2 equivalent) compared with 2°C scenarios, and for 1.5°C the gap is three GtCO2e larger.

What is Emissions Gap?
• Emissions gap is the difference between the emissions levels in 2020 necessary to meet climate targets, and the levels expected that year if countries fulfill their promises to cut greenhouse gases.
• So, the emissions gap reveals how much more needs to be done by countries in order to meet the target of keeping global warming levels below the 2°C safe limit as agreed in the Paris climate accord last year.

Significance of the Finding
• The Report shows that the INDCs, even if fully implemented, would only help the world in staying below an increase in temperature of 3.2°C by 2100, and this would have disastrous consequences for the climate.
• The report has therefore emphasised on pre-2020 action by countries. According to it, raising ambition before 2020 is likely the last chance to keep the option of limiting global warming to 1.5°C.
• However, considering the political realities of the world especially the G-20 countries, the pre-2020 action would be an extremely difficult task to achieve.

5.8. EVIDENCE OF LOST CHANDRABHAGA RIVER FOUND

• Scientists have found evidence of the mythical Chandrabhaga River near the UNESCO world heritage site of Konark Sun Temple in Odisha.
• This river figures prominently in ancient literature, although at present no river exists in the proximity of the Konark Sun Temple.
• An aerial examination of the area through satellite imagery depicts the trail of a lost river which is otherwise difficult to identify in the field.
• The existence of a palaeochannel at some locations is further corroborated through shallow surface geophysics using ground penetrating radar.
• The geological map shows that the study area is covered with alluvium, a deposit characteristic of rivers.

5.9. FLY ASH UTILIZATION POLICY

Why in Ne3ws
• The Maharashtra state cabinet has recently approved the State Thermal Power Plant Ash Utilisation Policy. With this it has become the first state to adopt this policy.
• The policy seeks to curb transport of fly ash produced in the coal-based thermal plants and stipulates measures to utilize all coal waste at source.
Significance

- It will help in cutting down air pollution as much of the fly ash pollutes the air while transportation.
- This would help in saving the ash transportation cost, a whopping Rs. 2000 crore at present, which is borne by the power stations.
- This could lead to cutting the cost of power to consumers.
- This would become the source of additional revenue for the government.

Key features of the Policy

- The government has announced cluster development of ash-based industries, such as cement, in the vicinity of all thermal power plants. The industries, in joint venture with the government, will be given land, ash and tax incentives.
- Fly ash can be used for making cement, pre-fabricated building material, bricks, laying roads, housing and industrial buildings, dams, flyovers, reclaiming low-lying areas, wasteland development, stowing of mines and all other construction works. These uses will be suitably promoted.
- The government has directed departments like Rural Development, PWD, Urban development, Tribal, Social Justice and premier schemes such as Housing for All, Pradhan Mantri and Mukhya Mantri Sadak Yojna to use at least 15% ash component in their works.
- The coal ash can be used in the agricultural land to increase its productivity and hence agriculture department has also been roped in to promote the fly ash among farmers.
- The government has also decided to export fly ash after treating it with cenospheres, which is expected to generate revenue of Rs 1,500 crore.
- The government has decided to set-up a company, Maha Gen Management Services (MahaGeMS), to manage the ash generated at all government-run and private thermal plants in the state.

5.10. SIGNIFICANCE OF COMMUNITY FORESTS IN CONTROLLING CARBON EMISSIONS

Need

- Tropical forests are one of the most significant carbon storage points above the ground. Indiscriminate afforestation, thus, exposes the world to large amount of carbon emissions.
- At least one-fourth of carbon stored in these tropical forests is found in the collectively-managed territories of indigenous people and local communities.
- To look at differently, about One tenth of the total carbon contained above ground in tropical forests is in collectively managed forests which lack formal and legal recognition.
- Without secure rights, these communities and their forests are at risk of illegal, forced, or otherwise unjust expropriation and capture by more powerful interests, thus displacing the residents, destroying the forests and releasing the carbon they contain into the atmosphere.

Advantages of community management

- Indigenous peoples and local communities are the best stewards of these forests.
- Further, securing the rights of indigenous peoples to own and manage their forests is an inexpensive way to limit emissions while improving communities’ economic stability.
- A recent study says that ecosystem services provided by tropical forests like soil retention, pollination, biodiversity, flood control, source of clean water along with tourism and other economic benefits to various sectors amount trillions of dollars. In contrast, the cost of securing these land rights is less than 1% of the total benefits.

Challenges

- Many tropical forest nations have not embraced this cost-effective solution to preventing further emissions from forest loss.
According to a report of Rights and Resources Initiative (RRI) released earlier this year, only 21 of 188 countries included forest people in their national plans for reducing carbon emissions under the Paris Agreement.

Studies have shown that indigenous people and local communities customarily claim at least 50% of the world’s lands—including forests—but legally own just 10% of global lands, and have some degree of recognized management rights over an additional 8%.

The lack of legal protection makes the forests more vulnerable to exploitation. For example, about 60 per cent of the forest cover of Arunanchal Pradesh is classified as “unclassed state forest, or USF”, and is largely under the control of the local communities. The State of Forest Report (2011) has recorded a decline of 74 sq. km in the forest cover in the community-owned forest land in the State.

Way Forward

- Global communities, thus, need to recognize that keeping tropical forests intact will prevent carbon emissions.
- Community management of forest which is a reality must be promoted not only for its environmental benefits but also the various economic and social benefits it offers.

5.11. DISASTER RISK REDUCTION

- The Asian Ministerial Conference on Disaster Risk Reduction, 2016 was concluded recently at New Delhi.
- The Conference sought to pave the way towards implementation of the Sendai Framework in the Asian region.

Key Highlights

- India-UN Agreement
  - India and United Nations Office for Disaster Risk Reduction signed a Statement of Cooperation.
  - The Statement underlined the guiding principles, objectives and areas of cooperation between India and UNISDR towards the effective implementation and monitoring of the Sendai Framework on Disaster Risk Reduction (SFDRR).
  - India will partner with UNISDR to work towards strengthening the capacity of Asian countries in ensuring risk resilient development.
  - It will also facilitate the sharing of knowledge and experiences, and collaborative efforts towards addressing critical regional challenges.

- Focus on Vulnerable Sections
  - India laid stress on working towards the protection of vulnerable sections especially women.
  - Women are disproportionately affected by disasters. But they have unique strengths and insights which should be effectively channelized. The need to train a large number of women volunteers to support special needs of women affected by disasters was emphasized.

- Use of Technology
  - There should be investment in risk mapping globally.
  - New technology needs to be utilized in enhancing the efficiency of the disaster risk management efforts.
  - Social media and mobile technologies must be properly applied in this.

- Local Capacity
  - The local body form part of decision making and are the first to act on disaster management.
  - Thus, there is a need to focus on building on local capacity and initiative and ensuring that the opportunity to learn from a disaster is not wasted.

- The regional plan would support national laws and national actions and advocated stronger disaster laws.
- There is a need to bring about greater cohesion in international response to disasters.
- The Conference came to an end with the adoption of the ‘New Delhi Declaration’ and the ‘Asian Regional Plan for Implementation of the Sendai Framework’.

New Delhi Declaration
It was a political statement spelling out the commitment of participating governments towards preventing and reducing disaster risk, and strengthening the resilience of communities, nations and the Asian region.

Recognising the need to accelerate the implementation of global frameworks, it committed to a people-centered and whole-of-society approach towards DRR.

It also emphasises the need to enhance the capacity of communities and ensure participation of all stakeholder groups towards achieving resilience.

- **Asian Regional Plan for Implementation of the Sendai Framework**
  - It focused on the methodology to reduce disaster risk at national and local levels.
  - It has arrived at a longer term road map of cooperation and collaboration, spanning the 15-year horizon of the Sendai Framework, as well as a two-year action plan to further disaster risk reduction with specific, actionable activities.

### 5.12. DELHI SMOG

**About**
- Delhi witnessed the worst smog in almost two decades, with consistently hazardous pollution levels being recorded for over a week.
- The air quality was 10 times worse than the safe levels.
- A number of factors were seen as responsible for the smog- stubble burning from Punjab and Haryana, vehicular pollution, Diwali crackers and rising levels of dust from construction and allied activities formed the major reasons.
- Adverse weather conditions, such as low wind speed coupled with drop in temperature and high humidity, which had blocked dispersal of pollutants, deteriorated the conditions further.

**Vehicular Pollution**
- Vehicular pollution contributes a lot to the particulate matter in the air.

**Measures taken**
- Odd-Even policy,
- Ban on 10 years old diesel vehicles
- SC had ordered the Center and NCR states to divert commercial vehicles not destined for Delhi and levy environmental compensation charge on commercial vehicles to discourage them from passing through Delhi.

**Issues**
- These measures are not comprehensive.
- Not all measures have been implemented well by the states.
- Even the ECC that has been collected has not been fully utilized.

**Suggestions**
- Comprehensive road transport policy whereby promotion of public transport is needed. Several studies have shown that public transport provides more than 65 per cent of Delhi’s commuting needs but occupies less than five per cent of road space.
- This should be coupled with imposing disincentives to purchase private vehicles. In this a combination of pollution taxes, rationalising licensing and registration of vehicles, congestion tax, car free areas etc should be implemented.
- Urban planning should be long-term which should give enough space for non-motorised transport like cycling and walking.
- The challenge is political will as automobile is one of the most important industry in India.

**Stubble Burning**
- Burning of agricultural waste add greenhouse gases that cause global warming, besides pollutants such as carbon monoxide, ammonia, nitrous oxide and sulphur dioxide and a high quality of PM2.5 that severely affect human health. It not only pollutes the air but also deprives the land of useful nutrients.
• Stubble burning in the northern States significantly contributes to the poor air quality in large parts of the Indo-Gangetic Basin, with local and cascading impacts felt from Punjab all the way to West Bengal.
• It is one of the most significant reasons for increasing pollution in the NCR region in winters that has become a regular menace.

• Efforts taken
  ✓ Punjab has imposed a prohibition on the burning of paddy straw
  ✓ It further launched initiatives aimed at better utilisation of biomass, including as a fuel to produce power.
  ✓ NGT has banned crop burning in the NCR region.

• Issues
  ✓ The root of the problem is financial- removing crop residues is expensive and thus is not preferred by the farmers. Further the use of mechanized harvesters which don’t cut the crop more close to the ground is aggravating the problem. The present efforts fail to address this issue.
  ✓ The efforts of utilizing biomass do not match the scale of agricultural residues
  ✓ Present efforts fail to address farmers’ anxiety to remove the surplus from the fields quickly to make way for the next crop.
  ✓ There is no mission mode approach to the annual crisis.

• Suggestions
  ✓ Most of the biomass is burned during the winter when the demand for fodder is rising and thus the surplus material could be efficiently utilized.
  ✓ Power production from biomass, mechanized composting and bio-gas production should be scaled up by increasing investment.
  ✓ Policy support should be given to farmers to incentivize their liberal adoption.
  ✓ Conservation agriculture needs to be popularized which would encourage farmers to use newer low-till seeding technologies allowing much of the crop residues to remain on site, and curb the release of a variety of pollutants.
  ✓ Eminent agriculture scientist MS Swaminathan has suggested commercializing the paddy straw to address the problem. Paddy straw can be used for making animal feed, cardboard, paper and other products. Thus, if sufficient financial incentives are given to the farmers, they would not resort to burning them.
  ✓ There is also a need to develop rice varieties that are both rich in grain yield and high in straw quality. Use of such dual-purpose rice varieties will help to maintain food security, farm income and improve environmental sustainability.

Environmental Emergency

• The NGT had prescribed certain measures to be taken if pollution levels breach prescribed levels. For example, it said that if PM 10, PM 2.5 are in excess of 500, 300 respectively, a state of environment emergency should be declared.
• The measures could include a temporary shutdown of thermal power plants, temporary closure of all construction activity in affected areas etc.

UPSC IN PAST
Mains 2015
Q. Mumbai, Delhi and Kolkata are the three mega cities of the country but the air pollution is much more serious problem in Delhi as compared to the other two. Why is this so?
6. SCIENCE AND TECHNOLOGY

6.1. FIRST AUGMENTED REALITY (AR) INSTITUTE TO OPEN IN VARANASI

About
- India’s first augmented reality (AR) education and training institute will be set in Varanasi at a cost of over Rs130 crore.
- The institution will be established by the central government in partnership with Eon Reality, an augmented reality company based in the US.
- While the company will invest two-thirds of the initial expense, the central government will bring in the rest.

Significance
- Augmented reality is seen as the next big thing in the Internet revolution especially in learning and practical training space
- It will allow students from various ranges like skill schools, engineering, research, etc. to experience a different kind of learning before entering the real-world workplace.
- It will be a virtual manufacturing shop floor that will provide students from diploma- to research-level “hands-on training” on high value machines that are beyond the budgets of institutions.
- Each trainee will be able to unpack the machine part by part and learn through virtual dissection. Like a real machine, it will throw new problems to trainees and thus would help in better training.
- The institutions and the software deployed will be able to create virtual machines of many sectors-from car design to the assembly line of an automobile firm, from textiles to heavy engineering machines.
- The idea goes well with the Skills India and Digital India initiative of the government.

6.2. NANOGENERATOR

About
- Pune based Indian Institute of Science Education and Research (IISER) and the National Chemical Laboratory have developed a nanogenerator that could produce up to 14 volts of electric power when thumb pressure is applied.
- To produce the nanogenerator, the researchers electrospun a piezoelectric polymer [P(VDF-TrFE)] directly onto a flexible, conducting carbon cloth.
- The carbon cloth was produced by the researchers by heating a piece of cotton cloth at 800 degree C for several hours in an inert atmosphere.
- The voltage of 14 volt with a current of several microamperes is the highest power output reported for wearable type of nanogenerator using conducting cloth as the electrode.

Significance
- Currently, there is considerable research emphasis to develop flexible or wearable devices like digital watches, health gear etc. Such devices should be portable, lightweight, shock-resistant, and inexpensive.
- An essential condition for these devices is that they should be powered by harvesting easily available mechanical or vibration energy, making battery or related wiring redundant.
- Thus, the development of such piezoelectric material is increasing. This invention can pave the way for further development in this field.

Piezoelectricity is the electric charge that accumulates in certain solid materials (such as crystals, certain ceramics, and biological matter such as bone, DNA and various proteins) in response to applied mechanical stress. It basically refers to electricity resulting from pressure.
6.3. FAST NEUTRON REACTOR

Why in News?

- Russia has invited India to join it in developing the next generation nuclear reactors and to participate in its fast-reactor research project.
- The multipurpose fast reactor project, known by the Russian acronym MBIR, is coming up at the International Research Centre in Dimitrovgrad located in the Ulyanovsk region in Russia.

What Are Fast Reactors?

- A fast neutron reactor/fast reactor is a type of reactor in which nuclear fission chain reaction is sustained by fast neutrons.
- Such a reactor does not need any neutron moderator such as water which serves such a purpose in thermal reactors.
- Fast reactors are beneficial in the sense that it can help in the reprocessing and deactivation of radioactive waste material and produce energy as well.
- MBIR, the fast reactor project follows the closed fuel cycle.
- Transitioning to closed fuel cycle which is based on fast neutron reactors can solve five essential problems: safety, competitiveness, shortage of fuel, reprocessing and refabricating the used nuclear fuel and radioactive waste.
- It also addresses the non-proliferation of fission materials and weapon technologies.

More on MBIR

- The main purpose of the MBIR is to conduct large no. of reactor studies of Generation-4 nuclear systems.
- MBIR’s design includes three independent loops that can be used to test different coolants like gas, lead, molten salt and others.

Where Does India Stand?

- The country is currently developing breeder reactors which will be fuelled by the country’s vast thorium deposits.
- The Advanced Heavy Water Reactor (AHWR) is the latest Indian design for a next-generation nuclear reactor.
- Russia has also offered India a new breed of reactor units – the VVER-Toi (typical optimised, enhanced information design) for the third and fourth units of Kundakulam project in Tamil Nadu.

6.4. MYSTERY BEHIND BIRTH OF SATURN’S RINGS SOLVED

Why in News?

- A study conducted by researchers at the Kobe University and Tokyo Institute of Technology, Japan have concluded that the planetary rings that surround Saturn, Neptune and Uranus were formed four billion years ago.
- Researchers believe that these were formed when large objects passed very close to the planets and got destroyed by them.

What is it?

- The giant planets in the solar system have very diverse rings.
- While that of Saturn is made mostly of icy particles, the rings of Uranus and Neptune are darker and may have higher rock content.
- Researchers used computer simulations to study the disruption of Kupier belt objects by tidal force when they passed by the planets.
- Researchers calculated that this happened during the Late Heavy Bombardment.
- It is thought that Pluto-sized objects from the Kupier belt existed beyond the Neptune.
6.5. NASA’S NEW INSTRUMENT- BILI

Why in News?
- NASA has developed a new instrument that could search for signatures of life on Mars.

What is it?
- NASA will be using BILI- Bio Indicator Lidar Instrument, fluorescence based remote sensing instrument.
- It is similar to radar in principle and operation but instead of using radio waves, it uses light to detect and ultimately analyze the composition of particles in the atmosphere.
- This instrument is currently in use by the U.S military to remotely monitor the air to detect potentially life threatening chemicals, toxins and pathogens.
- Although NASA has used fluorescence-instruments to detect chemicals in Earth’s atmosphere, it has never been employed in planetary studies.

How does it work?
- Positioned on a rover’s mast, BILI would first detect dust plumes.
- Once detected, two ultraviolet lasers from the instrument would pulse light at the dust.
- The illumination would cause the particles inside these dust clouds to resonate or fluorescence.
- By analyzing the fluorescence, scientist could determine whether the organic particles in the dust have been created recently or in the past.
- BILI can detect small levels of complex organic materials from a distance of several hundred metres.
- Therefore, it could detect bio-signatures in plumes above recurring slopes – even the areas that are not easily accessible by a rover.
- Also, it could do ground-level aerosol analysis from afar. This reduces the chances of contamination of sample.
- BILI’s measurements do not require consumables other than electric power and can be conducted over a broad area.

6.6. CSIR’S TECHNOLOGY FOR LEATHER PROCESSING

Why in News?
- Central Leather Research Institute has come out with a game changing technology to make leather processing environmentally stable and to reduce chromium pollution load.
- The technology is called “Waterless Chrome Tanning Technology” and is a first of its kind.
- The sector hopes to achieve its target of USD 27 Billion by 2020 employing this technology.

Background
- Chromium is the most sought after tanning agent with 2.0 billion sq. Ft of leather being made in India.
- About 20 thousand tons of chrome tanning agent is discharged in water.
- CSIR “Waterless Chrome Tanning Technology has been accepted PAN India.
- This technology completely eliminated two processes after and before tanning.
- It also eliminates the use of water in tanning.
- This process reduces the total dissolved solids in wastewater by 20%.
- It also brings down the usage of chromium by 15-20% resulting in material saving.

Significance
- Such technological interventions will help realise the vision of Make-in India.
- It will promote environment friendly leather processing.
- It will help promote global fashion forecasting for colours, design thus leading to increased trade and exports.
## 6.7. MCR-1 ISOLATED IN INDIA

### Why in News?
- Scientists have isolated resistance causing mcr-1 gene in a strain of E.coli in India.

### What is it?
- Mcr-1 gene is responsible for resistance against the antibiotic, Colistin- the last mile antibiotic that the human race has currently access to.
- Colistin belongs to a group of antibiotics called polymixins which are termed “critically important by WHO. It is used when no other antibiotic works.
- Colistin resistance has been previously detected only in mutations in the chromosomal/genetic path. And mutations do not spread from one patient to another.
- On the other hand, mcr-1, the gene is found in the plasmid medium, a small DNA molecule outside of the chromosomal DNA.
- In other words, the infection can spread in hospitals and the community now.
- Mcr-1 has already been detected in China, USA and Brazil.

### Situation in India
- Detection of mcr-1 gene in India is alarming news.
- Colistin is used rampantly for non-therapeutic purposes such as growth promotion and disease prevention in poultry, farming and aquaculture in India which makes the situation all the more vulnerable.
- Although the government has advised to restrict usage of antibiotics, however no action has been taken of yet.
- Moreover, the discovery of new strain of antibiotic years away, the fight against AMR is a tough road ahead.

## 6.8. SMART INDIA HACKATHON 2017

### About
- The ‘Smart India Hackathon 2017’ is a pan-India 36-hour nonstop digital programming competition which will take place in more than 20 centres simultaneously.
- The initiative seeks to challenge the students of all the technology institutions in India to find innovative solutions to some of the daunting problems faced by our nation.
- The Hackathon will have nearly 500 problem statements in the beginning. For example, developing a dynamic Health Map that can tap into online data sources to ensure rapid response to disease outbreaks such as H1N1, dengue and chikungunya through faster information flow between public health systems.
- **Significance:** The initiative will help institutionalize a model for harnessing the creativity and skills of youth for nation-building.

## 6.9. INDIA-UK NEWTON FUND RESEARCH PROGRAMME
- India and the UK have announced a Newton Fund research programme worth up to USD 80 million to jointly address global societal challenges.
- An annual USD 1 million **Newton Prize** was also launched recently. The prize will recognise the Newton Fund's best science or innovation that promotes economic development and social welfare of partner countries.
- For 2017, the prize is open to entries from India, Malaysia, Thailand and Vietnam which focus on the grand societal challenge of public health and well-being, covering issues such as anti-microbial resistance, disease, healthcare, and nutrition.
6.10. SOLAR CELLS FROM HUMAN HAIR

About

- Researchers at the Indian Institute of Science Education and Research (IISER) in Kolkata have used human hair to produce cost-effective, metal-free cathodes for use in solar cells.
- Metal-free cathodes or carbon cathodes have been produced in the past however they lag behind the metal ones in terms of efficiency and performance. This human hair based graphitic porous carbon cathode, on the other hand, is at par with the metal ones and more commercially viable.
- The porosity, along with high surface area to volume ratio, plays an important role in adsorption-desorption of electrolyte.

Significance

- This is a simpler, quicker and relatively cheaper process. Unlike in the case of other synthetic porous carbons, no physical or chemical activation process or templates is required.
- The cathode was found to generate high open-circuit voltage, which is at par with conventional platinum and activated carbon cathodes. Thereby, the power conversion efficiencies can also be enhanced.
- This is the first instance where a bio-waste-derived electrode has been used as cathode in a quantum dot sensitised solar cell device.
7. SOCIAL

7.1. PRADHAN MANTRI SURAKSHIT MATRITVA ABHIYAN (PMSMA)

About the PMSMA

- It has been launched by the Ministry of Health & Family Welfare (MoHFW).
- It aims to provide assured, comprehensive and quality antenatal care, free of cost, universally to all pregnant women on the 9th of every month.
- It envisages to improve the quality and coverage of Antenatal Care (ANC) including diagnostics and counseling services as part of the Reproductive Maternal Neonatal Child and Adolescent Health (RMNCH+A) Strategy.

The Highlight of PMSMA

- Participation of the Private Practitioners: The programme follows a systematic approach for engagement with private sector which includes motivating private practitioners to volunteer for the campaign developing strategies for generating awareness and appealing to the private sector to participate in the Abhiyan at government health facilities.
- Identification and follow up of high risk pregnancies. A sticker indicating the condition and risk factor of the pregnant women would be added onto MCP card for each visit:
  - Green Sticker - for women with no risk factor detected
  - Red Sticker – for women with high risk pregnancy

- A National Portal for PMSMA and a Mobile application have been developed to facilitate the engagement of private/ voluntary sector.

7.2. BRICS URBANISATION FORUM

Why in News?

The 3rd BRICS Urbanization Forum Meet was held in Visakhapatnam. The theme was - “Building responsive, inclusive and collective solutions for urbanisation”.

About BRICS urbanisation forum

- The BRICS Urbanization Forum was established in 2011 at the 3rd annual BRICS summit in Sanya, China and the 1st BRICS Urbanization Forum was held in New Delhi.
- The Urbanization Forums were created with a focus on urban infrastructure to specifically discuss various thematic areas within the umbrella of urbanization and infrastructure.
- The main idea behind the forum is to –
  - share urban knowledge
  - develop mechanisms for peer-to-peer exchange,
  - promote evidence-based policy making and
  - Learn useful lessons from individual experiences of ‘urban transition.
- Through the forum there is a collective bargaining power in the global economic order.

7.3. SCHOOL EDUCATION QUALITY INDEX (SEQI)

- Niti Aayog has organised the first regional workshop on School Education Quality Index (SEQI) to improve the learning outcomes among school children.

About SEQI

- The SEQI is a composite index that will report annual improvements of States on key domains of education quality, conceptualized and designed by NITI Aayog and the MHRD.
• The larger vision of the index is to shift the focus of States from inputs towards outcomes, provide objective benchmarks for continuous annual improvements, encourage state-led innovations to improve quality and facilitate sharing of best practices.

• In order to precisely report the quality of education imparted across India, the SEQI is divided into two categories: 1. Outcomes and 2. Governance Management.

• These are further divided into three domains of Outcomes (Learning, Access and Equity) and two domains of Governance & Management (Governance Processes and Structural Reforms). Currently the index has 34 indicators and 1000 points, with the highest weightage given to learning outcomes (600 out of 1000 points).

What has been inferred workshop?

• Highest quality evidence available suggests that across the board increase in education spending in India has not led to an improvement in learning outcomes.

• Inputs such as infrastructure, teacher training, student-teacher ratio etc. alone have had negligible impact on student learning.

• Integrating inputs with accountability and early childhood literacy/numeracy will radically transform the quality of education imparted in schools.

7.4. WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL (WHO FCTC)

Why in News?

The seventh session of the Conference of the Parties (COP7) to the WHO Framework Convention on Tobacco Control (FCTC) was held in New Delhi.

About WHO FCTC

• The WHO FCTC is an evidence-based treaty that reaffirms the right of all people to the highest standard of health.

• The WHO FCTC was developed in response to the globalization of the tobacco epidemic.

Why the need for convention?

• The consequences of the on-going tobacco epidemic which, if unchecked, will kill about 1 billion people in the 21st Century.

• By 2030, over 80 percent of the world’s tobacco-related mortality will be in low- and- middle income countries.

• To cooperate internationally and research on tobacco use and tobacco control and its consequences among girls and women, as well as boys and men, with special attention to vulnerable groups, in respect to social determinants of health.

• Tobacco control is related to a number of Sustainable Development Goals and targets, including those related to the environment and human rights.

7.4.1. PICTORIAL WARNINGS ON TOBACCO

• India ranks 3rd globally among 205 countries with 85 per cent implementation of pictorial warnings on tobacco products pack.

• The top two countries are Nepal and Vanuatu.

• India has demonstrated global leadership by implementing 85 per cent pictorial warnings on all tobacco packages.

• According to WHO, tobacco-related diseases kill about 2,500 Indians daily and over 10 lakh Indians a year.

• It is estimated that about 5,500 youth and children (as young as eight years old) initiate tobacco.

• India has 12 crore tobacco users, according to the Global Adult Tobacco Survey.

• The total direct and indirect cost of diseases attributable to tobacco use was Rs 1.04 lakh crore ($17 billion) in 2011 or 1.16 per cent of India’s GDP.
7.5. SUPREME COURT’S GUIDELINES ON FEMALE FOETICIDE

Why in News?
Supreme Court issued a series of directions to control the crime of female foeticide, including an all-India database to keep tabs on the number and gender of new-born.

The Guidelines of SC

- **To maintain a centralised database**— All the States and the Union Territories in India shall maintain a centralized database of civil registration records from all registration units so that information can be made available from the website regarding the number of boys and girls being born.
- **Fast track court**— The Courts which deal with the complaints under the Act shall be fast tracked and the concerned High Courts shall issue appropriate directions in that regard.
- **Constitution of a Committee** of having three HC Judges that can periodically oversee the progress of the cases.
- **Effective implementation of the The Pre-conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act, 1994.**
- **The awareness campaigns** with regard to the provisions of the Act as well as the social awareness shall be undertaken.
- **All India Radio and Doordarshan** functioning in various States to give wide publicity pertaining to the saving of the girl child and the grave dangers the society shall face because of female foeticide.
- **Incentive Schemes**- directed that States and Union Territories, which do not have any incentive schemes for the girl child, shall frame the same.

7.6. SAUR SUJALA YOJANA

Why in News?
- The PM on the occasion of 16th Foundation Day of Chhattisgarh had launched the Saur Sujala Yojana. Also, Chhattisgarh is the first state to implement the scheme.

About the scheme
- Under the scheme, solar powered irrigation pumps of 3HP and 5HP capacity would be distributed to farmers by March 2019.
- The scheme targets areas where there is no reach of electricity.
- Around 51,000 farmers would be benefitted in the state with the launch of the scheme.

Advantages of Solar Powered Irrigation System
- **The installation of solar pumps is done in arid regions** such as in Africa, India and South America
- Aiming at increasing local farmers productivity and as a consequence, improving their living conditions.
- It helps in saving Energy.
- There is no fuel cost - as it uses available free sun light.
- Can be operated lifelong.
- It is highly reliable and durable.
- Easy to operate and maintain.

7.7. KERALA DECLARED OPEN DEFECATION FREE

Why in News?
- Under the Swachh Bharat Mission (Gramin/Rural) Kerala has become the third State to be declared Open Defecation Free (ODF), Sikkim was first and Himachal Pradesh was second to be declared ODF.

**SWACHHATA DOOT**
These are Sanitation Messengers- who are village level motivators who work to strengthen communication machinery at the village level with participatory social mobilization, engagement of village level motivators (may be undertaken by the States in accordance with these guidelines.)
Kerala, with a rural population of approximately 3.5 crores, is also the largest State so far to have achieved the ODF Status, after Sikkim (6 lakhs) and Himachal Pradesh (70 lakhs).

Earlier, Gujarat and Andhra Pradesh became the first states to be declared ODF in Urban Areas.

7.8. SMART GRAM INITIATIVE

Why in News?

- President Pranab Mukherjee had inaugurated a smart model village pilot project at the Rashtrapati Bhavan.
- The five villages which will be developed into the smart villages under this pilot project are Dhaul, Alipur, Harichandpur and Taj Nagar from Gurgaon district and Rojka Meo from Mewat district of Haryana.
- Recently there initiatives were inaugurated in these villages by the Chief Minister of Haryana.

About Smart Gram

- A smart gram would have the required basic physical and social infrastructure with a layer of smart information and communication embedded in the infrastructure to improve governance and delivery of services, livelihood and economic opportunities.
- The focus of Rashtrapati Bhavan is on creating a sustainable and inclusive development model that can be easily replicated.
- This model is based on the convergence of resources and effort by the central government, state government, district administration, panchayati raj institutions, public sector, private sector and enlightened villagers.

7.9. TREAD SCHEME

Why in News?

Recently the Ministry of Micro, Small and Medium Enterprises (MSME) started operating the scheme titled “Trade Related Entrepreneurship Assistance and Development (TREAD)” to promote women entrepreneurs.

About the scheme

- The scheme envisages economic empowerment of women through trade related training, information and counseling activities related to trades, products, services.
- Under the scheme, there is a provision for Government of India grant up to 30% of the loan/ credit maximum up to Rs. 30.00 lakh as appraised by lending institutions/ banks.
- The lending institutions/ banks would finance loan assistance for a group of women through NGOs for undertaking non-farm activities.

Significance

- With improving social-economic factors like higher education, higher support across family/work environment women are increasingly emerging as Entrepreneurs and Corporate Leaders.
- According to NASSCOM, Startups have grown by 125% from $2.2 Bn in 2014 to $4.9 Bn in 2015. Women’s participation has seen a 50% rise since 2014.
- Dedicated schemes like Trade Related Entrepreneurship Assistance and Development (TREAD) will enable trade related training, information and counseling.

7.10. CENSUS 2011- DIFFERENTLY ABLED PERSONS TO EDUCATIONAL INSTITUTIONS

- According to the recently released 2011 Census data almost two-third of the differently-abled population in the category of 9-11 attend educational institutions.
- As many as 40.2 lakh (61.2 per cent) out of the total of 65.7 lakh disabled population in the specified age group were attending educational institutions in 2011.
• This is an improvement of 11 percentage points from 2001 when 33 lakh (50 per cent) of the 65.3 lakh differently abled persons had attended educational institutions.
• The enrolment figure is 10 percentage points lower than that of the total population — 71 per cent attending educational institutions.
• Around half of the people with ‘multiple disability’ (54.4 per cent) and ‘mental illness’ (50.3 per cent) did not attend any educational institute.
8. CULTURE

8.1. BHAKTI MOVEMENT

Why in News?
- Much like other civilizations, the image of the singer-songwriter in India has had a powerful impact on its society and history.

What is the Bhakti Movement?
- Bhakti movement refers to the religious movement during the medieval period which emphasized single-minded devotion to god.
- It originated in South India between 7th and 12th century. It then moved northwards.
- It achieved a great deal of popularity through the poems of the Alvars and Nayanars, the Vaishnavite and Shaivite poets.
- Bhakti movement preached unity of God or one God through different names.
- It propagated the concept of Bhakti, intense love and devotion.
- It condemned rituals, ceremonies and blind faith.
- It preached open-mindedness about deciding religious matters.
- It challenged the caste distinction.
- Kabir, Guru Nanak, Mirabai, Surdas and Tulsi Das, Chaitanya are great exponents of Bhakti movement.

Impact of the Bhakti Movement on the Medieval Society
- The Bhakti movement helped bridge the gap between the Hindus and Muslims and encouraged religious tolerance. It happened due to the leaders of Bhakti movement and the Sufi saints.
- The followers of this movement rejected the caste distinction.
- The practice of Sati took a backseat.
- Importance of women in the social fabric increased.
- The movement aroused an awakening among the people regarding futility of ritualism and superstitions.
- Some rulers adopted liberal policies under the influence of the Bhakti movement.
- Bhakti saints preached in the local dialects thereby promoting vernacular literature.
- It is known for giving birth to the new sect of Sikhism.
- The movement empowered those from the lowest rungs of society.

8.2. GOOGLE TO GIVE VIRTUAL TOUR OF MONUMENTS

Why in News?
- Google has tied up with Archaeological Survey of India for the creation of 360 degree virtual tour of 280-odd monuments across the country.

What is it?
- The virtual tour will be available in Google maps.
- Some of the monuments included are Taj Mahal, Victoria Memorial and the ruins of Hampi.
- 30 of the 280 monuments are in West Bengal.
- Google has launched an array of products in India like the offline maps, live traffic alerts and inclusion of unknown places on the maps by local guides.
9. ETHICS

9.1. CELEBRITY’S LIABILITY FOR ENDORSING PRODUCT IN MISLEADING ADS

Why in news?
- The Consumer Protection Bill, 2015, which seeks to replace the Consumer Protection Act, 1986, by inserting tough measures for the protection of consumer rights and providing strict punishment to violators, is currently under consideration.
- It was referred to a Standing Committee, which gave a report suggesting measures like making celebrities accountable for the brands they endorse, and called for severe penalties such as jail term for celebrities endorsing the brands, publishers and broadcasters of misleading advertisements and manufacturers of such products.
- However, a high level Group of Ministers (GoM) recently decided that instead of jail term for the endorsers they would face a fine up to Rs 50 lakh and a ban on appearing for advertisements for up to three years.

Ethical issue
- Celebrities have faced criticism recently for not only endorsing products in misleading ads but also publicly supporting political or social causes. In this light the question that arises is whether celebrities should be liable for what they say or endorse in public? Should there be a greater vigilance on them as against a normal person?

Why should celebrity be held liable?
- Duty of Care
  ✓ Being a public figure confers a certain status in our society and gives one great reach and influence. It is a fact that more people listen to them because they are ‘celebrities’.
  ✓ The very basis of endorsing a product by a celebrity is the presence of trust and goodwill. The idea is to persuade the public by an identifiable individual who enjoys the confidence of the people.
  ✓ Direct influence of celebrity on consumer behaviour is proven. That is why in India more than 50% of advertisements have celebrities in them.
  ✓ Thus, there has to be a duty of care.
- Moral Responsibility
  ✓ Even the celebrity knows his image and words will influence the choice/minds of the viewers. Thus, it becomes a moral responsibility on him to know about the properness of the product as he becomes an important link in the chain between the producer and final consumer.
  ✓ Celebrities have moral obligation of care towards the vulnerable sections of society especially children who are most easily swayed by their endorsement.
- Commercial Linkage
  ✓ The celebrity is making monetary profits by commercial exploitation of this goodwill. Thus, there lies a corresponding duty towards the consumers.
- Legal Liability
  ✓ S.24 of the Food Safety and Standards Act, 2006 prohibits any person from promoting unfair trade practices which includes false or misleading advertisements.
  ✓ S.53 of the FSS Act put a liability on the party to publication of false advertisement with respect to nature, substance, quality, etc of the product. A celebrity endorsing the products could be interpreted to be included in this.

Issue in making them liable
- It can be argued that the celebrity naturally should rely on the credibility of the experts on whose advice the product is being endorsed.
- Further, the celebrity would not have the time and resources to find out about the authenticity of the claims.
• However, in such cases it must be seen that the celebrity performs due diligence with respect to quality and claims of the product. She must take the extra effort to go through the reports which are available in public before taking the contract.

Way forward
• Celebrities have a duty of care towards the public and thus should perform due diligence on their behalf.
• Given that the public seems to credit celebrities with more knowledge than they should, celebrities probably have an extra duty to be clear about the gaps in their knowledge.
• Further, for products that are harmful when consumed in excess (e.g. soft drinks, junk food) the celebrity must precaution against excess consumption and entail advisory the long-term consequences.

9.2. CORPORATE GOVERNANCE

Why in news?
• Global Financial Stability report recently published by the International Monetary Fund (IMF) suggests that while corporate governance norms have improved across emerging markets, corporate governance standards fell in India between 2006 and 2014.
• Also, the Chairman of TATA sons was sacked recently. These events bring into question the level of ethical corporate governance in the country.

Objective of Corporate Governance
• To build up an environment of trust and confidence amongst those having competing and conflicting interest
• To enhance the shareholders" value and protect the interest of other stakeholders by enhancing the corporate performance and accountability

Larger issue of corporate governance
• “Shareholder value” is an economic imperative. The business judgment rule allows boards and managers to easily get away with pet projects, the avoidance of difficult decisions, or the excuse that “as long as the music is playing (for our industry), we have to dance.”
• The single most important job of the board is getting the right CEO. A close corollary is its willingness to get rid of the wrong CEO.
• External shareholders are inherently, significantly constrained regarding what they can know. ex: the bonuses received by CEOs during the 2008 Financial Crisis.
• When it comes to executive compensation, “How” is much more important than “How much.”
• To provide a balance of advisory support as well as monitoring oversight.
• Overconfidence and hindsight bias stay enemies of effective governance.

Steps taken
• A new Companies Act which has tightened norms to be followed by firms;
• Tightening of regulations relating to minority protection by market regulator Securities and Exchange Board of India or Sebi, and
• Surge in investor activism in the country is helping corporate governance.
• Disclosures have increased in India as stated in the report and as is evident from the companies Act, 2013 and provision of e-voting facility to the shareholders, the indices for ‘Protection of Minority Shareholders’ Interests’ and ‘Strength of Auditing and Reporting Standards’ ought to increase.
• Maintaining freedoms of cyberspace.