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GS PAPER II

1. POLITY

1.1 HUNG ASSEMBLY - GOA & MANIPUR

Why in news?

Governor of Goa ignored the established principle of inviting the single largest party and appointed BJP leader Manohar Parrikar as the Chief Minister.

What is the situation?

- The Congress has won 17 seats in Goa and the BJP has 13 MLAs in a House of 40.
- The Governor did not consult the single largest party and invited BJP, who formed an alliance, to form the government.
- A similar situation has developed in Manipur.
- Its Governor invited the BJP and allies to form the government, which won fewer seats than the Congress.
- These parties did not fight the election as part of a coalition.
- So the Congress should have been invited first.
- The BJP's claim should have been considered only if the Congress pleaded inability or failed the floor test.
- It should not be based on who forms the alliance faster.
- Speed cannot be the overriding or pressing consideration for the governor while assessing a party's claim to form government.
- Therefore decisions by both the Governors reflect partisanship.

What are Sarkaria Commission recommendations?

- The Constitution of India does not mandate any procedure to be followed by the Governor, in case of hung assembly.
- The convention of inviting the single largest party in such a case has been outlined by the Sarkaria Commission, which studied Centre-state relations in the 1980s.
- It specifically dealt with the situation where no single party obtained absolute majority.
- It provided the order of preference the Governor should follow in selecting a CM in such a situation –
 1. **An alliance of parties** that was formed prior to the elections.
 2. **The single largest party** staking a claim to form the government with the support of others, including independents.
 3. **A post-electoral coalition of parties**, with all the partners in the coalition joining the government.
 4. A post-electoral alliance of parties, with some of the parties in the alliance forming a government and the remaining parties, including independents, supporting the government from outside.
- They were affirmed by a Constitution Bench of the SC in Rameshwar Prasad v Union of India in 2005.

What are Punchhi Commission recommendations?

- The Justice M.M. Punchhi Commission on Centre-State Relations in 2010 laid down some guidelines to be followed in the appointment of a chief minister by a governor.
- It also said the governor should invite the leader of “a pre-poll alliance commanding the largest number” or the “largest single party” to form the government in case no party or pre-poll coalition has a clear majority.
- According to Bommai judgment, such a CM must prove the majority on the floor of the assembly.

What was SC's ruling?

- Congress filed a petition challenged the Governor's decision in the Supreme Court.
- SC asked the BJP government in Goa to prove its majority within 48 hours, instead of the 15 days' time given by the Governor.
- But it was a half-measure.
- It should have upheld the principle of inviting the single largest party first.

1.2 DEMANDING ST STATUS - NARIKURAVARS

What is the issue?

- The Constitution ensures certain protection and benefits for communities deemed as having Scheduled Tribe (ST) status.
- Social and political mobilisation has led to the increase of number of STs 225 in 1960 to 700 today.
- As the number of communities demanding ST status expands, it brings the criteria of the recognition and the legitimacy of the process under scrutiny.

What does the constitution say?

- The Constitution only states that STs are specified by the President after consultation with the Governor.
- It does not define or specify a particular criterion.
- According to the Ministry of Tribal Affairs, the criterion includes
 1. Indication of “primitive” traits,
 2. Distinctive culture,
 3. Geographical isolation,
 4. “Shyness of connect” with the community at large &
 5. “Backwardness”

Who are Narikuravars?

- Many communities try to prove themselves as meeting the criteria, to avail of the benefits of being accorded ST status.
- One such group is Narikuravar.
- They are a **semi-nomadic tribe**, originating in Northern India before migrating south to Tamil Nadu.
- They share religious, cultural, and political characteristics with many of the **Roma groups in Europe**.

- Traditionally hunters, they were mostly providing security for kings.
- However, once invaders took over they became nomadic and retreated into forests, where they preserved their traditions.
- When hunting became illegal, they started living at the margins of the society in dire poverty, making and selling small ornaments.

What is their present socio-economic status?

- It has high levels of illiteracy, multiple health challenges, and unemployment.
- Currently, there are about 8,500 Narikuravar families in Tamil Nadu i.e less than 1% of their population.
- The government classifies them as a Most Backward Class community.
- Such a classification leads to the assumption that they have a higher chance of being above the poverty line than communities recognised as STs.
- Due to this classification, they have been competing for access to government benefits with nineteen other larger communities with higher socio-economic status.

Do they satisfy the criteria for STs?

- Their nomadism across rural and urban areas is against the criteria of “**geographical isolation**”.
- Narikuravar sell their products to the community at large. So they might not display ‘**shyness of connect**’.
- But since these criteria are not explicit, it is difficult for the community to formulate clear political demands.

What does it signify?

- The betterment of obviously disadvantaged groups like Narikuravar rests on discretionary political acts.
- This is because there is no well-developed, transparent criterion and a clear definition of what makes groups eligible for ST status.
- Such criteria with specific economic and social data should be developed.
- It can help compare communities requesting ST status with other STs and to the Indian population at large.

1.3 VOTE TAMPERING IN EVMS

Why in news?

BahujanSamaj Party (BSP) chief Mayawati decided to move court against the alleged tampering of Electronic Voting Machines (EVMs).

Why EVMs can't be tampered?

- **Connectivity** - Indian EVMs are not connected to the internet, so hackers cannot tamper with Indian EVMs.
- **Scale** - The BBC report that an American had hacked Indian EVMs is false. The American opened one EVM, changed some parts, and hacked the new parts he had put in the machine. It is impossible to access hundreds of thousands of EVMs in India.
- **Security** - They are also guarded by troops and by representatives of all political parties as well.
- **Sequence** – It isn't possible to programme the EVM at the manufacturing stage to record all votes for one candidate. Nobody knows what order the candidates or parties will be listed on the EVM till after the last date

of withdrawing nomination papers. That means the order of buttons is known for about two week. It would be far too little time to manipulate the buttons.

- Specific EVMs are assigned to constituencies in a randomized matter pretty late in the day, and in the presence of representatives of all parties.
- Ballot paper-based voting is subject to much more fiddling and manipulation. A party can capture polling booths and stamp all the ballot papers in their favour.

What can be done?

- Election Commission has devised EVMs with a paper trail called Voter-verifiable paper audit trail (VVPAT).
- In this a voter immediately gets a printout of her vote, which is then deposited in the ballot box. So, every voter can see whether her vote has been registered correctly.
- This can be used to recheck in case of controversy.
- This can be used to mitigate the suspicions.

1.4 ELECTORAL BONDS

Why in news?

Electoral Bonds have been proposed as a way of reforming election funding in the Union Budget 2017.

What is an Electoral Bond?

- Electoral bonds will be issued by a notified bank for specified denominations.
- Those who want to donate to a political party can buy these bonds by making payments digitally or through cheque.
- Then they are free to gift the bond to any registered political party.
- The bonds will likely be bearer bonds and the identity of the donor will not be known to the receiver.
- The party can convert these bonds back into money via their bank accounts.
- The bank account used must be the one notified to the Election Commission and the bonds may have to be redeemed within a prescribed time period.
- The issuing bank will remain the custodian of the donor's funds until the political party redeems the bond.

Why is it important?

- Most political parties use the negligent regime on donations to accept cash donations from anonymous sources.
- Nearly 70% of the ₹ 11,300 crore in party funding over the past 11-year period came from unknown sources.
- Currently, political parties are required to report any donation of over ₹ 20,000 to the IT department.
- But there has been a trend of more donations flowing by way of hard cash in smaller amounts.
- To fix this, the Budget has proposed to reduce the disclosure limit to ₹ 2,000 and insists that any amount over this must be paid through cheque or the digital mode.
- The idea is that electoral bonds will prompt donors to take the banking route to donate, with their identity captured by the issuing authority.

What are the problems in electoral bond?

- While the identity of the donor is captured, it is not revealed to the party or public. So transparency is not enhanced for the voter.
- Also income tax breaks may not be available for donations through electoral bonds.
- This pushes the donor to choose between remaining anonymous and saving on taxes.
- Also privacy of the donor is compromised as the bank will know their identity.

1.5 SPECIAL CATEGORY STATUS

What is the issue?

Manipur is about to lose the special status on the basis of the Fourteenth Finance Commission recommendations.

What is Special Category Status?

- The Constitution does not include any provision for categorisation of any State in India as a Special Category Status (SCS) State.
- SCS was introduced by Fifth Finance Commission in 1969.
- It provides for additional Central assistance and tax concessions.

Criteria for Special Category Status	
Ministry of Commerce & Industry	Planning Commission
<ol style="list-style-type: none"> 1. Geographical isolation 2. Inaccessible terrain 3. Poor resource base 4. Remoteness to larger market 5. Poor infrastructure 	<ol style="list-style-type: none"> 1. Hilly & difficult terrain 2. Low population density 3. Strategic location along the borders with neighboring countries 4. Economic and infrastructural backwardness 5. Non-viable nature of state finance

What kind of assistance do SCS States receive?

- Following the constitution of the NITI Aayog and the recommendations of the 14th Finance Commission (FFC), Central plan assistance to SCS States has been subsumed in an **increased devolution** of the divisible pool to all States.
- They enjoy concessions in excise and customs duties and income tax rates.
- Besides, assistance to Centrally Sponsored Schemes for SCS States was given with 90% Central share and 10% State share.

Why A.P. claimed for SCS status recently?

- Following the bifurcation of A.P., **Andhra lost a large volume of its revenue** due to Hyderabad remaining the capital of Telangana.
- In a 2014, the then Prime Minister of India had said that SCS would be extended to the successor State of Andhra Pradesh for a period of five years.
- This oral submission has been the basis for A.P.'s claim to the status.

What has been the Centre's response to A.P.?

- A.P. does not qualify as a Special Category State. It has neither geographical disadvantages nor historical disadvantages such as socio-economic and infrastructural backwardness.
- Hence offering it the SCS would give impetus to every other state to demand for the same.
- Instead, Centre announced a **package to grant special assistance** to Andhra Pradesh.
- Here an amount equivalent to what the state might have got as a special category state will be compensated by Centre through externally aided projects for five years.
- The special package offered meets most of the reasonable expectations of a State struggling to recover from bifurcation and dealing with the imminent loss of the capital city and its revenues.
- It included Polavaram irrigation project declared a national project i.e Centre would meet the financial needs.
- Also, Central Board of Direct Taxes (CBDT) would issue two specific notifications on tax concessions being extended to A.P.

What does it mean for Manipur?

- Loss of special category status would mean that Manipur would no more get the 90% Central grants assistance.
- It would now get only 30% Central grant and the remaining has to be either arranged by itself or taken as loan from the Centre.
- Chief Minister of Manipur acknowledged the hit on state's finances due to restructuring of central assistance to the state.
- Even though higher devolution of taxes was positive for the state's finances, it was not enough to meet the state's Plan revenue expenditure.

1.6 BABRI MASJID ISSUE

Why in news?

Chief Justice of India said the Ram Janmabhoomi-Babri Masjid title suits were a matter of 'sentiments and religion' that were best resolved amicably, preferably without intervention by the courts.

What the CJI has said?

- In 2010, the Lucknow Bench of the Allahabad High Court directed that the site occupied by the Babri Masjid before its demolition **should be divided three ways equally** among Muslims, Hindus and **NirmohiAkhara** group of Hindu Sadhus.
- Recently a three-judge bench heard a petition by a BJP MP challenging the 2010 ruling to split the disputed land.
- The Supreme Court suggested an out-of-court settlement since it's a matter of religion and sentiments.
- CJI said the court will ask any person to mediate who is acceptable to all sides.
- However, at least 5 earlier attempts at resolving the decades-old quarrel through negotiations have not been successful.

What's the dispute?

- It is about a plot measuring 2.77 acres in Ayodhya that houses the Babri mosque and Ram Janmabhoomi.

- This land is considered sacred among Hindus as it is believed to be the birthplace of Lord Ram.
- Muslims argue that the land houses Babri mosque, where they had offered prayers for years before the dispute erupted.
- The controversy is over whether the **Babri mosque was built on top of a Ram temple** after demolishing or modifying it in the 16th century.
- Muslims, on the other hand, say the **mosque was built by Mir Baqi in 1528 and that Hindus took control over it in 1949**, when some people placed idols of Lord Ram inside the mosque

What are some of the important incidents happened?

- In 1853, the **first recorded incident of violence** over the holy site takes place during the reign of NawabWajid Ali Shah of Awadh.
- In 1984, Hindu groups form a committee to spearhead the construction of the Ram temple at the Janmabhoomi site.
- In 1990, Volunteers of the VHP **partially damage the mosque**. The then PM intervenes and tries to resolve the issue through negotiations, but these fail.
- **On 6 December 1992**, a large crowd of Hindu karsevaks (volunteers) demolished the 16th-century Babri Mosque in the city of Ayodhya. The demolition occurred after a political rally at the site turned violent.
- This leads to some of the most deadliest riots across the country, leading to the deaths of more than 2,000 people.
- The central government, headed by P V NarasimhaRao, sets up a commission of enquiry under Justice M S Liberhan on December 16.
- The High Court orders the Archaeological Survey of India (**ASI**) to **excavate the site** to determine if it was earlier a temple.
- The ASI begins the survey to determine whether a temple existed on the site.
- It finds evidence of the presence of a temple under the mosque. Muslim organisations dispute the findings.
- In 2010, the Allahabad High Court pronounces its judgment on the four title suits relating to the dispute and said that the disputed land be divided into three parts equally.

2. GOVERNMENT POLICIES, BILLS AND INTERVENTIONS

2.1 MATERNITY BENEFIT BILL

Why in news?

Lok Sabha recently passed The Maternity Benefit (Amendment) Bill, 2016.

What are the salient features of the bill?

- The bill to amend the Maternity Benefit Act, 1961.
- It increases the paid maternity leave for pregnant women working in the organised sector from 12 weeks to 26 weeks.
- The 26 weeks of leave will be for the first two pregnancies.
- For the third child, it will be of 12 weeks and 6 weeks for the fourth.

- It allows 12 weeks of paid maternity leave to mothers who are adopting a child below the age of three months and also to commissioning mothers who opt for surrogacy.
- It mandates employers to allow a woman to work from home.
- Organisations which employ more than 30 women (or 50 people, whichever is less) will now have to provide a crèche.
- The mother is allowed to visit the crèche four times during the day.

What are the positives?

- The enhancement of paid maternity leave for women is a progressive step.
- India is in third place, only Canada and Norway, in the level of maternity benefits such as paid time off work extended to women.
- The amendment is in line with several expert recommendations including that of the World Health Organisation, which recommends exclusive breastfeeding of children for the first 24 weeks.
- Giving benefits to adoptive mothers as well as women who get children using embryo transfers signals India is in step with social changes.

What are the shortcomings?

- The amended law covers only women in the organised work sector i.e only 1.8 million women, a small subset of women in the workforce.
- It ignores roughly 90% of the Indian women who are employed in the unorganised sector i.e shops, small service providers and cottage industries, in households as domestic helps etc.
- The only support available to them is a small conditional cash benefit of ₹ 6,000 during pregnancy and lactation offered under the Maternity Benefit Programme.
- The Bill excludes paternity leave. Therefore the benefit burden may discourage employers to hire women.
- Demands for inclusion of a non-discrimination clause in the bill were also made to ensure that no person is discriminated against for having availed any parental benefits.

What is the present condition of women in India?

- India lags far behind when it comes to maternal and infant mortality indicators.
- Every third woman in the country is undernourished and every second woman is anaemic.
- An undernourished woman is most likely to give birth to a low-weight baby.
- The UN Millennium Development Goals Report 2014 states that India recorded the highest number of maternal deaths, and accounted for 17% of global deaths due to pregnancy and childbirth-related complications.
- The Infant Mortality Rate is 40 per 1,000 live births.
- As per UNDP's Human Development Report 2015, women clock 297 minutes of unpaid work daily, compared to just 31 minutes for men.

What should be done?

- The income guarantees during the 26-week period should be ensured through a universal social insurance system.

- Such a policy would harmonise the varying maternity benefit provisions found in different laws that govern labour at present.
- Paternity leave should be included to stop discrimination against women in recruitment by employers who currently have to factor in benefit payments.
- Attitudinal change is also critical. Apart from not paying full benefits, many employers in corporate sector avoid appointing women in critical functions out of unwillingness to cope with women's life cycle changes, even seeking undertakings on avoiding pregnancy.
- Also the effectiveness of the revised Maternity Benefit Act depends on its proper implementation.

2.2 MENTAL HEALTHCARE BILL

Why in news?

The Mental Healthcare Bill, 2016 was recently passed by Parliament.

What are the provisions of the bill?

- **Definition** - It defines "mental illness" as a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life.
- It also includes mental conditions associated with the **abuse of alcohol and drugs**.
- It **does not include mental retardation** which is a condition of arrested or incomplete development of mind of a person, characterised by sub-normality of intelligence.
- **Rights** - It ensures every person shall have a right to access mental health care and treatment from mental health services run or funded by the appropriate government.
- It assures free treatment for homeless or people Below Poverty Line, even if they do not possess a BPL card.
- It ensure right to live with dignity and there shall be no discrimination on any basis including gender, sex, sexual orientation, religion, culture, caste, social or political beliefs, class or disability.
- A person with mental illness shall have the right to confidentiality in respect of his mental health.
- **Advance Directive** - A person with mental illness shall have the right to make an advance directive i.e how he wants to be treated for the illness and who his nominated representative shall be.
- This should be certified by a medical practitioner.
- If a mental health professional/ relative/care-giver do not wish to follow the directive, he can make an application to the Mental Health Board to review the advance directive.
- **Mental Health Authority** - The Bill empowers the government to set-up Mental Health Authority at national and state levels.
- Every mental health institute and mental health practitioners will have to be registered with this Authority.
- A **Mental Health Review Board** will be constituted to protect the rights of persons with mental illness and manage advance directives.
- **Mode of treatment** - A medical practitioner shall not be held liable for any unforeseen consequences on following a valid advance directive.

- A person with mental illness shall not be subjected to electro-convulsive therapy without the use of muscle relaxants and anaesthesia.
- Also, electro-convulsive therapy will not be performed for minors.
- Sterilisation will not be performed on such persons.
- They shall not be chained under any circumstances.
- They shall not be subjected to seclusion or solitary confinement.
- Physical restraint may only be used, if necessary.
- **Suicide** - A person who attempts suicide shall be presumed to be suffering from mental illness at that time and will not be punished under IPC.
- The government shall have a duty to provide care, treatment and rehabilitation to a person, having severe stress and who attempted to commit suicide, to reduce the risk of recurrence of attempt to commit suicide.

2.3 THE SURROGACY (REGULATION) BILL

What is Surrogacy?

When an another woman carries and gives birth to a child for a couple who want to have a baby but are unable to do so, because of infertility or some other problem, it is called surrogacy. This has been in the grey legal area in India.

What is the need for the bill?

- In 2002, India became the first country to legalise commercial surrogacy.
- By 2012, India had become the 'surrogacy capital' of the world with surrogacy tourism valued at approximately \$500 million annually.
- Surrogate mothers practice it as a way of earning livelihood and are often abused.
- Legal issues also emerge
- e.g In 2008, a Japanese couple began the process with a surrogate mother in Gujarat, but before the child was born they split and there were no takers for the child.
- In 2012, an Australian couple commissioned a surrogate mother, and arbitrarily chose one of the twins that was born.
- So the 228th report of the Law Commission of India recommended prohibiting commercial surrogacy.

What is the aim of the bill?

- It aims to prevent exploitation of women, especially those in rural and tribal areas.
- It prohibits couples who already have biological or adopted children from commissioning babies through surrogacy.
- It ensures parentage of children born out of surrogacy is "legal and transparent."

What are the features of the Bill?

- The bill was introduced in Lok Sabha in November 2016.
- It bans commercial surrogacy.

- Commercial surrogacy will result in a jail term of at least 10 years and a fine of up to Rs 10 lakh.
- The commissioning couples should be Indians, should have been married for at least five years and should have 'proven infertility' are candidates.
- Only a married blood relative to the commission parents can be a surrogate mother. She must have herself borne a child, and should not be a NRI or a foreigner,
- Under no circumstances money shall be paid to her, except for medical expenses.
- She can be a surrogate only once in her lifetime.
- Overseas Indians, foreigners, unmarried couples, single parents, live-in partners and gay couples are barred from commissioning the services of surrogate mothers.
- In essence, the Bill limits the practice of surrogacy to heterosexual Indian couples who have been married for five years, have no children, and are able to persuade a relative to become a surrogate altruistically for them.
- The Bill will apply to the whole of India, except Jammu and Kashmir.

What are the shortcomings?

- Disqualifying on the basis of nationality, marital status, sexual orientation or age, is against the **right to equality**.
- The **right to life** includes the right to reproductive and right to parenthood. So the state should not decide the modes of parenthood
- Sudden interruption would just push the \$400 million industry underground. Thus the very purpose of the bill- to protect surrogate mothers from exploitation would be defeated.
- Fertility specialists and attached business would suffer.
- Commissioning mothers, who are carrying a child, would be left in a limbo.
- Restricting only a blood relative to be a surrogate mother is illogical and unreasonable.

2.4 MEDICAL TERMINATION OF PREGNANCY ACT

Why in news?

The Supreme Court recently **declined a woman's plea** to abort her 26-week-old foetus detected with Down's Syndrome.

What was the court's rationale?

- It was contended that the congenital abnormality found in the woman's foetus and the woman's anguish about the future were the reasons for her decision of abortion.
- It was also argued that it was the **woman's constitutional right** to terminate her pregnancy.
- The court refused permission by **calling the foetus 'a life'**.
- It cited that the Medical Termination of Pregnancy Act of 1971 places a 20-week ceiling on termination of pregnancy.

What is MTP Act, 1971?

- Abortion in India is **legal only up to twenty weeks of pregnancy** under specific conditions and situations.
- One, the continuance of the pregnancy would involve a risk to the life of the pregnant woman or of grave injury of physical or mental health, or

- Two, there is a substantial risk that if the child were born, it would suffer from such physical or mental abnormalities as to be seriously handicapped.

Was the law challenged on any other occasion?

- On 2015, a 14-year-old rape victim sought and received permission from the Supreme Court to abort after the 20 weeks deadline had passed.
- Her petition was treated as a “special case”, meaning it could not be used as a precedent.
- On January 2017, the Judges had relaxed the 20-week cap to permit another woman to terminate her 24-week pregnancy.
- In that case the foetus was diagnosed with anencephaly — a congenital defect in which the baby is born without parts of the brain and skull.
- The court had said that the abortion **was necessary to preserve the woman’s life**.
- In the case of the foetus with Down’s Syndrome, the court said the foetus posed no danger to the woman’s life.

What the draft MPT bill 2014 provides?

- The draft MTP increased the legal limit for abortion from 20 weeks to 24 weeks.
- It provides for **abortion beyond 24 weeks** under defined conditions.
- The Bill amends Section 3 of the 1971 Act to provide that “the length of pregnancy shall not apply” in a decision to abort a foetus diagnosed with “substantial foetal abnormalities” or if it is “alleged by the pregnant woman to have been caused by rape”.
- It also takes into account the reality of a massive shortage of both doctors and trained midwives, and seeks to allow Ayurveda, Unani and Siddha practitioners to carry out abortions.

Why is it essential to change the MTP law?

- **Foetal abnormalities show up only by 18 weeks**, so just a two-week window after that is too small for the would-be parents to take the difficult call on whether to keep their baby.
- Even for the medical practitioner, this window is too small to exhaust all possible options before advising the patient.
- There is an urgent need to empower women with sexual rights, legal protection against sex crimes and sex choices both in their own interest and for the sake of reducing the fertility rate as a whole.
- The lack of legal approval moves abortion to underground and they are done in unhygienic conditions by untrained professionals.

2.5 INTER-STATE WATER DISPUTES (AMENDMENT) BILL, 2017

Why in news?

The Inter-State River Water Disputes (Amendment) Bill, 2017 was introduced in the Lok Sabha.

What are the problems in present set-up?

- With increasing demand for water, inter-state river water disputes are on the rise.

- The present Inter State River Water Dispute Act, 1956 that provides the legal framework to address such disputes has many drawbacks.
- Under the present Act, a separate Tribunal has to be established for each dispute.
- There are eight inter-state water dispute tribunals, including the Ravi and Beas Waters Tribunal and Krishna River Water Dispute Tribunal. But only three of the eight tribunals have actually given awards accepted by the states.
- There is no time limit for adjudication or publication of reports.
- Tribunals like those on the Cauvery and Ravi Beas have been in existence for over 26 and 30 years respectively without any award.
- There is no upper age limit for the chairman or the members.

What are the proposals of the new bill?

- The bill proposes a single standing tribunal with multiple benches instead of multiple tribunals that exist at present.
- The total time period for adjudication of dispute has been fixed at maximum of 4.5 years.
- The decision of the Tribunal shall be final and binding with no requirement of publication in the official gazette
- As per the proposed bill, the Tribunal shall have one chairperson, one vice-chairperson and not more than six other members.
- It limits the tenure of the chairperson to five years or till they attain the age of 70, whichever is earlier.
- It also proposes to introduce mechanisms to resolve disputes amicably by negotiations through a Dispute Resolution Committee (DRC) before a dispute is referred to the tribunal
- DRC to be established by the central government consisting of experts.
- It also provides for a transparent data collection system at the national level for each river basin.
- It calls for the appointment of assessors to provide technical support to the tribunal.

2.6 COMPANIES AMENDMENT BILL

Why in news?

The Ministry of Corporate Affairs is making amendments to Companies (Amendment) Bill, 2016 based on standing committee report before taking up for consideration in the Parliament.

What are the highlights of the bill?

- It amends the Companies Act, 2013 in relation to structuring, disclosure and compliance requirements for companies.
- The 2013 Act limits the number of intermediary companies through which investments can be made in a company. It also limits the number of layers of subsidiaries a company can have. The current bill removes these limits.
- It also requires a group of persons who exercise beneficial control (above 25%) in a company to disclose such interest.

- The Act requires a separate offer letter to be issued to individuals to whom a private offer of shares has been made. The Bill removes the requirement of such an offer letter.
- The Act permits the appointment of members at the level of Joint Secretary to the quasi- judicial tribunal. The Bill mandates that a technical member must be at least of the level of an Additional Secretary. These provisions are in line with a 2015 Supreme Court judgment.
- However some CLC recommendations like residence requirements for directors; and compliance requirements for dormant companies were included.

2.7 DRAFT TRAFFICKING OF PERSONS BILL

Why in news?

The draft trafficking of Persons (Prevention, Protection and Rehabilitation) bill is about to be introduced.

What does the draft say?

- The draft bill addresses trafficking for prevention, rescue and rehabilitation.
- It seeks to levy severe financial penalties and jail terms ranging from seven years to life term for violators and repeat offenders punished with nothing short of a life sentence.
- It also seeks to bring focus on rehabilitation as a right.
- From inclusion of aggravated forms of trafficking and other offences to establishment of well-coordinated institutional mechanism from district to national level, the law covers a wide range of concerns.
- Trafficking for the purpose of forced labour, marriage, child bearing and administering narcotic drugs, psychotropic substances, alcohol and hormones for the purpose of trafficking is proposed to be punished with term not less than 10 years but which may extend to life imprisonment along with a fine of Rs 1 lakh.
- The same penalty provision is proposed to be applied in case of offence where a child is trafficked for the purpose of human shield, child soldiers or for commission of crime.
- It also proposes a national Anti- Trafficking Bureau for investigation and prosecution of Trans border crimes and for national level coordination.
- It denotes that an appropriate Government shall maintain either directly or through voluntary organisations, protection homes selected and managed in the manner, as may be prescribed for the immediate care and protection of the victims.
- It calls for setting up of shelter homes either directly or through voluntary organisations or use the existing shelter homes, as the case may be, one or more Special Homes in each district for the purpose of providing long- term institutional support for the rehabilitation of victims.
- The draft also puts in place the state anti-trafficking and the district anti trafficking committee.
- The draft puts much focus on monetary reliefs and provision for a rehabilitation fund.
- There is special emphasis on victim- witness protection and time bound investigation and trial and time bound inter- state and cross border repatriation.
- The proposed legislation calls for the constitution of special courts to try cases relating to trafficking.

- The proposed draft legislation also introduces stringent provisions to punish and deter traffickers and their associates from committing similar crimes in the future by way of confiscation, forfeiture and attachment and further auction of the property.

2.8 NATIONAL HEALTH POLICY 2017

Why in news?

The National Health Policy, 2017, was approved by the Union Cabinet which will replace the previous policy adopted in 2002.

What are the key highlights?

- The broad principles of the Policy are centered on professionalism, integrity and ethics, equity, affordability, universality, patient centered and quality of care, accountability and pluralism.
- It aims to achieve universal access to good quality health care services **without anyone having to face financial hardship** as a consequence.
- It intends on gradually increasing public health expenditure to **2.5% of the GDP**.
- It proposes free drugs, free diagnostics and free emergency and essential healthcare services in public hospitals.
- The policy advocates allocating **two-thirds of resources to primary care**.
- It proposes two beds per 1,000 of the population to enable access within the first 60 minutes after a traumatic injury.
- To reduce morbidity and preventable mortality of **non-communicable diseases** (NCDs) by advocating pre-screening.
- It highlights AYUSH as a tool for effective prevention and therapy that is safe and cost-effective.
- It **proposes introducing Yoga** in more schools and offices to promote good health.
- It also proposed reforming medical education.
- The policy also lists quantitative targets regarding life expectancy, mortality and reduction of disease prevalence in line with the objectives of the policy.

What are the key targets?

- Increase Life Expectancy at birth from 67.5 to 70 by 2025.
- Reduce Fertility Rate to 2.1 by 2025.
- Reduce Infant Mortality Rate to 28 by 2019.
- Reduce Under Five Mortality to 23 by 2025.
- Achieve the global 2020 HIV target (also termed 90:90:90 global target).
- To reduce premature mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases by 25 per cent by 2025.
- Reducing the prevalence of blindness to 0.25 per 1000 persons by 2025.
- The disease burden to be reduced by one third from the current levels.
- Elimination of leprosy by 2018, kala-azar by 2017 and lymphatic filariasis in endemic pockets by 2017.

What are the positives?

- It seeks to **promote universal access to good quality healthcare services** and a wide array of free drugs and diagnostics.
- The proposed steps such as a **health card for every family** will certainly help improve health outcomes in India.
- The recommended **grading of clinical establishments** and active promotion and adoption of standard treatment guidelines can also help improve the quality of healthcare delivery in India.

What are the lacunas?

- The policy duplicates portions of the Health section of Finance Minister's 2017 Budget speech, reiterates health spend targets set by the erstwhile Planning Commission for the 12th Five Year Plan.
- It **fails to make health a justiciable right** in the way the Right to Education 2005 did for school education.
- A **health cess** was a pathbreaking idea that was proposed in the draft policy but it was dropped.
- Whether Health should continue to be in the State List, or in the Concurrent List is not answered in the policy.
- Among the most glaring lacunae in the present context is the lack of capacity to use higher levels of public funding for health.
- Although a major capacity expansion to produce MBBS graduates took place between 2009 and 2015, this is unlikely to meet policy goals since only 11.3% of registered allopathic doctors were working in the public sector as of 2014.

2.9 SDMC'S ORDER

Why in news?

South Delhi Municipal Corporation (SDMC) made it mandatory for all hotels and restaurants in its jurisdiction to give full access to the general public to their toilet facilities.

What the order has said?

- The move is part of a **soon-to-be national campaign** to make more toilet facilities available to the public, with special focus on women and children.
- The broad ideas are hygiene and security.
- The suggestion came from Delhi Lieutenant Governor who urged SDMC to explore the possibility.
- Restaurant managements have been given the discretion to charge up to Rs 5 per use of their toilets.
- SDMC claims that as a result of the initiative, an additional 3,500 toilets will be accessible to the public.

What is the reaction of the public?

- Many have complained of an **undermining of their 'rights of admission'**.
- Others have pointed out that it is **insensitive to deny access** to an individual who needs to use the restroom.
- Both sides agree that the proposed Rs 5 charge to ostensibly cover costs of maintenance and cleaning.

What is the need for such a decision?

- The corporation maintains that because restaurants get health trade licences from the corporation, they are bound to follow its orders.
- While on paper, the SDMC has 600 urinals and roughly 400 toilet complexes in its jurisdiction, **most of them are unusable**.
- Maintenance of the SDMC's public facilities is poor because the corporation does not have jetting machines that spray water at high pressure to clean the toilets.
- So, in the light of the SDMC order, it is pertinent to consider, the state of its existing public utilities also.

Why it is not a proper solution?

- It is just a quick fix solution.
- It did not look into the full system, including the availability of toilets, water for flushing, the sewerage network, sewage treatment and provisions for discharge of the treated sewage into waterbodies.
- Instead of outlining a programme incorporating these elements, the problem is trivialised by shifting attention away.
- Health and Sanitation should be provided the government and the private restaurants cannot be forced to open their toilets to the public.
- It is not a solution round the clock.

What could be done?

- The solution lies in **building more public toilets** and ensuring they are properly maintained and financially sustainable.
- Most public toilets are single-storey buildings; they could easily have another floor of toilets, thereby doubling the capacity without any need for additional land.
- Another possible approach for the SDMC would be to use **public-private partnership**, not only to build toilets, but provide and/or fix the different links in the supply chain of managing and disposing waste.
- **Sewage treatment plants** can also be built on land leased by the government and capital invested by the private sector.

2.10 BANNING COW SLAUGHTER

Why in news?

The Uttar Pradesh government is undertaking a crackdown on buffalo slaughterhouses, meat processing plants and retail outlets in the state, including the legal ones.

What are the cons of meat production?

- Apart from the religious sentiments being hurt, meat production is also detrimental to the environment.
- Agriculture contributes roughly 15% of all greenhouse gas emissions and half of this comes from meat production.

- An estimated 30% of the world's land not covered with ice is used to grow food for livestock, leaving a huge footprint in terms of land and water consumption.
- Eating around 100g of meat per day per person results in emitting about 7.2 kg of CO₂ per day as compared to 2.9 kg of CO₂ emitted by vegan diets.

What are the necessities for slaughter houses?

- **Freedom** - India is a secular nation and the culture of eating food differs across communities, regions and religions. Hence this cannot be infringed upon.
- **Economy of Farmers** - The cow has been traditional used for ploughing, drawing water from wells for irrigation, threshing grain and pulling carts.
- Due to modernisation most of these activities became redundant
- So the farmer today rears cattle and buffaloes essentially for milk.
- The viability of milk production depends on maintaining only high-milking animals.
- But it is not possible if there is no mechanism available for disposal of unproductive animals.
- It costs about Rs 70,000 per animal per year to be fed properly and looked after.
- A small farmer cannot afford to spend such an amount on unproductive animals.
- The reason for increase in Buffalo population by 61% between 1997 and 2012 and the maintaining of female buffaloes at the rate of 82% of its total population is due to the availability of an avenue for disposal in the form of slaughterhouses.
- The current environment of closing down abattoirs and so-called unlicensed meat shops discourage dairy farming.
- This could eventually hit the country's milk production and force reliance on imports.
- **Nutrition** - Beef is a cheap source of protein for a large number of people, hence critical for their nutritional security.

2.11 BAN ON LIQUOR VENDS

Why in news?

The Supreme Court ordered to remove "liquor vends" located within 500 m distance of national, State highways, associated roads and service lanes.

What was the order?

- The licences of liquor shops across the highways will not be renewed after March 31, 2017.
- The judgment ordered that the prohibition on sale of liquor alongside highways would extend to stretches of such highways that fall within limits of municipal corporations, city towns and local authorities.
- The ban also extends to bars, pubs and restaurants located on highways.
- It also prohibits signage and advertising of availability of liquor on highways.
- No shop for sale of liquor should be visible from the National and State highways and noted that the visibility is the first temptation.

What was the court's rationale?

- The order is intended to **prevent drunk driving**.
- 1.5 lakh fatalities happen annually in road accidents and about 10% deaths were caused because of driving under the influence of alcohol.
- The court said revenue generation could not be a “valid reason” for a state or a Union Territory to give licence for liquor shops on highways.
- India being a signatory to the **Brasilia Declaration on Road Safety**, it is imperative that policy guidelines are framed to control road accidents.

Is the freedom of choice compromised?

- The judgement infringes on individuals right to decide with their own free will.
- But alcohol influences the brain and compromises its ability to make a reasoned choice.
- Moreover, there is third party damage.
- Those around the abusers like wives, children, neighbours, those walking or driving on the streets, the poor sleeping on footpaths are at grievous risk.
- Therefore the issue is not simply about the freedom of choice of drinkers.
- It is also the freedom of life, safety and dignity, of family income and the productivity of other people.

Whether prohibition is effective?

- According to WHO, the annual per adult consumption of absolute alcohol in India is 4,000 ml.
- It is 100 ml in Pakistan and 200 ml in Bangladesh.
- In the predominantly Buddhist Myanmar and Bhutan, it is 700 ml.
- It is less than 1,000 ml in 26 countries where governments and culture have taken an anti-alcohol view.
- So culture does influence peoples' behaviour, especially when the government also holds a similar view.
- Most religions in India prohibit drinking. If government policy and efforts complement this cultural factor, lessening the present alcohol consumption is possible.
- Alcohol consumption might never become zero.
- So the initial focus of prohibition should be towards reducing alcohol consumption.

What are the shortcomings?

- It will not stop the availability of liquor. One can always buy it beforehand.
- The order **does not exempt outlets in cities and towns**, where most of the consumers are local residents.
- The move halves the country's excise revenues from alcohol from current levels of Rs.12,000crore per annum.
- States could lose Rs.50,000crore in overall tax revenues. Maharashtra is expected to be the worst-hit.
- **Retail outlets can perhaps move another 500 m** with minimal expense and no great loss of clientele but established hotels and clubs does not enjoy such luxury.
- Smaller administrative units like Puducherry will find relocation of many shops impossible, as they are caught between the highway and the sea.

- Goa, a small State that depends heavily on tourism, is in a similarly difficult situation.
- The relaxation of the liquor-free zone from 500 m to 220 m from the highways in the case of areas with a population of 20,000 or less might only partly address their concerns.
- Even if less than 5% of the jobs in the travel and tourism sector are affected, it could amount to 1.5 million jobs.
- The ban will also hurt the many small businesses which survive around the bars and restaurants.
- It is neither easy nor perhaps even desirable for bars to move away from the highways into residential neighbourhoods.

What should be done?

- There are better ways of dealing with drunken driving starting like stricter enforcement of current laws, tougher and more frequent policing, and stiffer consequences, like deterrent fines and loss of driving privileges.
- A 'zero tolerance' approach to drunk driving has shown positive results wherever it has been enforced adequately, such as in Mumbai.

2.12 MANDATORY AADHAAR

Why in news?

Aadhaar is being made mandatory for many government schemes like withdrawing pension money to access to mid-day meals at school.

What is Aadhaar?

- Aadhaar is a 12 digit unique-identity number issued to all Indian residents based on their biometric and demographic data.
- The data is collected by the Unique Identification Authority of India (UIDAI).
- It is a statutory authority established by the Government of India, under the Ministry of Electronics and Information Technology, under the provisions of the Aadhaar Act 2016.
- Over a billion Aadhaar numbers have now been handed out.

What are the positives of having Aadhaar?

- The number would serve as a unique identifier, suitable for all forms of identification.
- The government can transfer welfare payments directly to Aadhaar-linked bank accounts, cutting out India's notoriously corrupt middlemen.
- It could be used to borrow money, tap into a pension account.
- It was a simple, lightweight, elegant solution with a minimal cost.
- Initially using it was voluntary.
- Proving ones identification is very simple.
- Aadhaar designers promised robust privacy legislation.

What are the problems of Aadhaar?

- Presently in India, providing certificates for one's identity is sometimes impossible.
- Supreme Court has mandated that Aadhaar should be voluntary and limited to the programs that require it. But the government is forcing Indians to use their ID number to access all available government services.
- Concerns about the security of the Unique ID system still remain.
- Indians do not have no fundamental right to privacy.
- Therefore citizens are left trusting Aadhaar's administrators i.e UIDAI. It needs to be clearly accountable, but that's not the case.

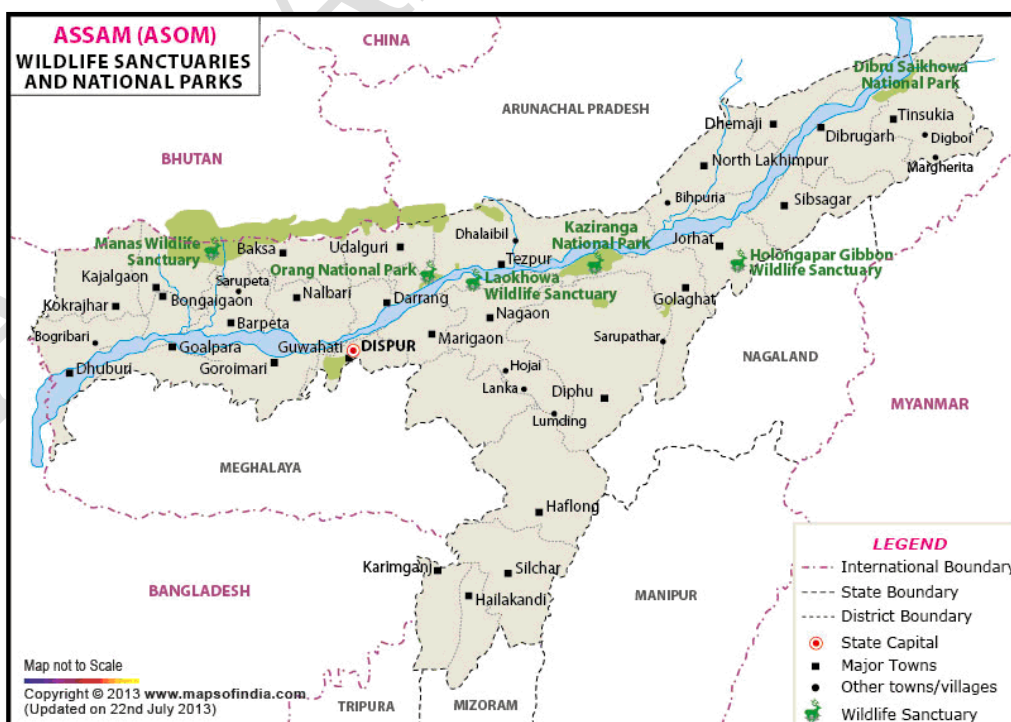
2.13 BBC DOCUMENTARY ON KAZIRANGA TIGER RESERVE

Why in news?

- The Ministry of Environment and Forests and Climate Change (MoEF&CC) has urged the Ministry of External Affairs to revoke the visas of BBC's crew and ban their entry into India for at least five years.
- It is a retaliative measure for filming a documentary that allegedly put India's conservation efforts in bad light.

What are the features of KNP?

- Kaziranga National Park in Assam hosts two-thirds of the world's great one-horned rhinoceroses.
- It is a World Heritage Site and located on the edge of the Eastern Himalaya biodiversity hotspot.
- It is home to the highest density of tigers and was declared a Tiger Reserve in 2006.
- It also hosts large breeding populations of elephants, wild water buffalo, and swamp deer.
- The rivers Brahmaputra, Diphlu, Mora Diphlu and Mora Dhansiri flow through it.
- The great one-horned rhinoceros is native to India and listed as Vulnerable on the IUCN Red List



What is the documentary about?

- The documentary, *One World: Killing for Conservation* explored the anti-poaching strategy adopted by the guards of the Kaziranga Tiger Reserve (KTR) in Assam while protecting the one-horned Indian Rhino.
- It referred to “dark secrets” of conservation at KTR.
- The documentary said the forest guards had been given powers to shoot and kill poachers.
- It also stated that more people were killed by guards than rhinos by poachers at the tiger reserve.

What is NTCA's rationale?

- The NTCA alleged that the violations by the journalist involved
 1. Filming after sunset,
 2. Dishonouring the undertaking provided,
 3. Deviating from the original synopsis submitted to me and its authority.
 4. Not screening the documentary before a committee of the moef&cc.
- It described the documentary as “grossly erroneous reporting”.
- BBC had failed to submit the documentary to MoEFCC and the MEA for obligatory previewing.
- So, NTCA has asked chief wildlife wardens of all tiger range states and field directors of tiger reserves to disallow filming permission to BBC in any of the protected areas for a period of 5 years.

What is the shoot and sight order?

- The forest guards were given “legal immunity” in Kaziranga and Corbett to use lethal force to stop poaching.
- Shoot-at-sight does not mean forest guards can gun down anyone they spot inside the forest.
- It means that they are empowered to open fire if they cannot satisfactorily establish the identity or purpose of an intruder.
- A protection force is in any case entitled to retaliate if attacked. The distinction here is that the guards are allowed to shoot as a pre-emptive move before they are shot at.
- Poachers in KNP are known to carry Kalashnikov assault rifles.
- Forest guards with their usual .303s have a slim chance without a first-mover advantage.
- Kaziranga does not have any village inside.
- Therefore, there is no question of villagers entering or leaving the park at unusual hours.
- That makes anyone who is spotted a suspect.

How effective is the shoot and sight order?

- There is no denying that firepower is required to take on heavily-armed poachers.
- But there is a question about its effectiveness and guard's responsible use of power.
- **Abuse** - The guards allegedly settled personal scores in the name of anti-poaching operations.
- They even colluded with the poaching syndicates.
- The park authorities were accused of harassing local villagers while shielding political bigwigs.

- **Effectiveness** - The guns also worked only as a limited and temporary deterrent to poaching.
- Even after hundreds of poachers were killed in Kruger, South Africa, around 500 instances of rhino poaching were reported every year.
- In Kaziranga, forest guards shot dead 45 poachers over 2014 & 2015, yet at least 44 rhinos were poached in the park during the same period.
- Reliance on guns tends to shift focus from intelligence-based anti-poaching drives.
- **Local Community** - Guns alienate local stakeholders whose support is crucial for any conservation effort to succeed in the long term.
- Instead, disempowered, persecuted and impoverished locals become easy recruits for poaching syndicates.
- Sharing the economic benefits of conservation with local communities will not immediately sever the lifelines of poaching syndicates.
- Yet it is more important to include them as it is more about recognising their rights and dignity. Over time, the collective stake of these communities can grow to work as an effective deterrent.

2.14 NO-FLY LIST

What is the issue?

- Ravindra Gaikwad, a MP belonging to the Shiv Sena, assaulted a duty manager on an Air India flight.
- Following this there was an airline-wide boycott against him.
- It has prompted the civil aviation ministry to consider drawing up an official No-Fly List (NFL) as well as rules specifying the grounds on which airlines can bar people from travelling.

How important is to address unruly passengers?

- Unruly passenger incidents include violence against crew and other passengers, harassment, verbal abuse, smoking, failure to follow safety instructions, and other forms of riotous behaviour.
- It is a serious matter that needs to be dealt with as it has the potential to put at risk the safety of others flying with them.
- A survey by International Air Transport Association (IATA) revealed that there was one unruly incident for every 1,205 flights in 2015 and 1/ 1,282 flights in 2014.
- The majority were Level 1 incidents i.e they are verbal in nature and can usually be dealt with successfully by crew using de-escalation training.
- The survey also that unruly behaviour had increased in the last five years, while physical aggression was one of the top three safety issues that caused concern to cabin crew.

How it is dealt with in India?

- The Aircraft Rules, 1937, spell out a course of actions to be taken following disruptive behaviour.
- Rules 22 and 23 highlight the parameters under which action can be taken under the jurisdiction of India, and the crucial role of the pilot-in-command.
- The government and Airlines in India are beginning to take some steps to put in place a “no-fly” list.

How effective is the No-Fly list?

- No-fly lists may come from the airline industry's right guaranteed under international aviation law to accept or decline passengers on grounds of flight safety.
- The experience in the US, where the list was mobilised after 9/11, has been far from happy because people can be assigned to it without even being informed.
- There were no specific guidelines on who can be added in the list. e.g Anything can trigger the ban like an intemperate social media entry.
- It also loosened protection of civil rights and gave free reign to social prejudice e.g the bulk of those who end up on the list were Muslims.
- US court declared that the method of compiling the no-fly list unconstitutional.
- Hence NFL can run into legal hurdles as it mandates public behaviour.
- There an informal no-fly list is best left to the airlines' discretion.
- Like hotels and restaurants, their staff should be skilled at spotting potential troublemakers.

2.15 CENSOR BOARD

Why in news?

- The Central Board of Film Certification i.e the 'Censor Board' has turned down a film KaBodyscapes recently.
- It has been viewed thrice by the Board.

What is CBFC?

- CBFC is a statutory body under **Ministry of Information and Broadcasting**.
- It regulates the public exhibition of films under the provisions of the Cinematograph Act 1952.
- Films can be publicly exhibited in India only after they have been certified by CBFC.
- The Board consists of non-official members and a Chairman (all of whom are appointed by Central Government) and functions with headquarters at Mumbai.
- It has **nine Regional offices**, one each at Mumbai, Kolkata, Chennai, Bangalore, Thiruvananthapuram, Hyderabad, New Delhi, Cuttack and Guwahati.
- The Regional Offices are assisted in the examination of films by Advisory Panels.
- The members of the panels are nominated by Central Government by drawing people from different walks of life for a period of 2 years.
- The Certification process is in accordance with The Cinematograph Act, 1952, The Cinematograph (certification) Rules, 1983, and the guidelines issued by the Central government u/s 5 (B)

What is the film about?

- It revolves around three characters.
- It includes a homosexual couple, of which one happens to be a Muslim and the other is a Hanuman-bhakt who comes from a family of right-wingers.
- Third is a feministic woman.

- The story is about how they struggle to find space and happiness in a conservative Indian City.
- The movie makers clarify that the film is about societal attitudes towards individual freedom and is not a critique of religion.

What are the Board's objections?

- The board is of view that the film is glorifying the subject of gay and homosexual relationship.
- They also held that the film is explicit of scene offending Hindu sensibilities depicting vulgarity, nudity and obscenity through the movie.
- It also held that the movie might invoke a 'law and order' problem.

Why is the move wrong?

- It is against the freedom of expression
- The view that the homosexuality is against culture is unwarranted as many temple sculpture in India celebrates sexual union of every kind.
- Moreover, there is no stricture against the depiction of nudity in Hinduism.
- Court judgments have categorically rejected the argument of 'law and order' as a criterion for banning a film.
- The Constitution gives an individual the freedom to practise his or her religion.
- It does not give the right to be protected from any reference to the religion that may be interpreted as giving offence. All practices are open to scrutiny and no 'religious immunity' is offered.
- India is a secular republic and no special rights are accorded to religion. The political rights are due only to individuals not to a whole religion.

What should be done?

- The Board's authority to effectively ban films should go.
- CBFC should only be a film certification body whose scope should be restricted to categorizing the suitability of the film to audience groups on the basis of age and maturity.

2.16 MORAL POLICING - ANTI-ROMEO SQUADS

Why in news?

The setting up of "anti-Romeo squads" was one of the election promises in Uttar Pradesh.

What is the purpose of these "squads"?

- They were meant to curtail eve-teasing and provide greater security to women.
- It is aimed at taking action against boys who are found outside girls' colleges, and are involved in eve-teasing and molesting girl students
- But couples were stopped just for being spotted together, though the squad admittedly had no legal jurisdiction to stop them.

Why it is bad?

- If the police can't tell the difference between molesters and amicable couples, the squads disperse humiliation, extortion and violence on innocent young people in public places.

- It violates citizens' rights and dignity
- It brings back medieval repressions especially at a time when walls between the genders are breaking.
- They make it unsafe for women to step out with men of their choice, inhibit families and foist retrograde notions about the sexes meeting.
- Earlier accusation of "love jihad" to describe mixed-religion marriages as was aggression targeted minorities. It included references to an incident of alleged abduction, gangrape and forced conversion of a Hindu girl to Islam in Kharkhoda area of Meerut.
- The current move has expanded hatred towards all young people.
- It is also against the concept of minimum government.

3. SOCIAL JUSTICE

3.1 TSR SUBRAMANIAN COMMITTEE

Why in news?

The government has decided to junk the TSR Subramanian committee report on education reform.

What is the view of HRD ministry?

- It termed the report as a "mere compilation" of older reports
- The ministry will soon announce another committee to give a fresh report.

What the original report contains?

- In 2015, the TSR Subramanian was set up to give a new education policy, which submitted its report in May, 2016.
- The original report bans the political parties from universities. However it is not present in the officially published report.
- **Banning political parties from the campus** is unlikely to go down well with the political class considering this is where they get recruits from.
- It had talked of the need for a standing Education Commission to continually assess the changing circumstances of the education sector and advise the HRD ministry on the need to upgrade policy accordingly.
- At the school level, it proposed that the Right to Education Act be amended to include mandatory learning outcome norms with the existing norms on infrastructure.
- It wanted to bring minority institutions under the purview of applicability of the **Economically Weaker Sections quota**.
- It had recommended that the selection of teachers for government schools be handled by an autonomous body to reduce corruption and politicisation.
- On the higher education front, it had called for a "flexible and nuanced" regulatory regime that allowed high-quality institutions much greater freedom than before on financial and administrative decisions.
- It suggested that accreditation of quality be made more outcome-based instead of being based on input metrics such as spending on infrastructure.

What is the way ahead?

- It is the government's prerogative to accept, fully or partially, or reject a report it commissioned.
- But junking a report that had many progressive recommendations is odd.
- Some of the recommendations it made represented a radical change from the past thinking and some aren't entirely new.
- But together they could have proven a worthy template for the country's education policy.
- The government should retain the best of what the Subramanian panel had recommended.

3.2 REPORT OF THE WORKING GROUP ON MIGRATION

Why in news?

- The Ministry of Housing and Urban Poverty Alleviation had constituted a Working Group to assess the impact of migration on housing, infrastructure, and livelihoods.
- The Group submitted its report recently.

What were the observations?

- Migration in India -
 1. Rural to Rural Areas - 47.4%,
 2. Urban to Urban Areas - 22.6%,
 3. Rural to Urban Areas - 22.1%&
 4. Urban to Rural Areas - 7.9%
- Reasons for migration - The share of family related migration (marriage) has increased from 28% to 36% between 2001 & 2011 Censuses.
- While 87% women migrants move due to family related reasons, 50% of men move due to work.
- The share of work-related migration decreased from 16% to 13% between Censuses.
- However, in terms of absolute numbers work-related migrants increased.
- Migrant workforce - In urban areas, about 33% of the male workforce, and 56% of the female workforce is composed of migrant workers.
- Nature of jobs - In urban areas, 33% of the male migrants work in traditional services (trade, hotels), followed by 27% in manufacturing, and 16% in modern services (real estate, education, health).
- Among female migrants in urban areas, 34% work in public services (public administration, railways), followed by 23% in manufacturing.
- Accesses to employment - Certain states have introduced domicile requirements with regard to employment. This puts migrants at a disadvantage.
- The Group recommended that states should remove such domicile requirements and laws.
- Access to benefits - Migrants are registered to claim legal and social entitlements at their source location.
- Post migration, they lose access to these benefits at the destination.

- The Group recommended that PDS should be made portable, and expanded to extend coverage to migrants.
- Housing - One of the key issues with regard to housing is poor supply, for both ownership and rental.
- Short-term migrants do not have access to short-duration accommodation.
- The Group recommended :
 1. Expansion of basic services to all settlements,
 2. Provision of wide variety of rental accommodation&
 3. Provision of dormitories and working women's hostels.

3.3 DEALING WITH HOMELESSNESS

What is the issue?

While the PradhanMantriAwasYojana (PMAY) has been expanded to include even the middle classes, little is being done to resolve the issue of homelessness.

What the official data says?

- Homeless are those living in a structure without a roof.
- According to the latest official data, merely 658 shelters have been created since the launch of the Shelter for Homeless programme under the National Urban Livelihood Mission (NULM) in 2013.
- These shelters across the country cater to a total homeless population of 35,000.
- This does not even amount to 5% of the total urban homeless population of 9.38 lakh.
- But the civil society feel that the census figures itself is a gross-underestimate.
- They estimate the extent of homelessness at 1% of the urban population i.e. 30 lakh people which is thrice the census figures.
- The low census count is attributed to the difficulties of counting those without a permanent abode or the fact that the census data on homelessness excludes those such as construction labourers who sleep where they work.

What does the Supreme Court mandate?

- As per the norms laid down by the Supreme Court, there has to be one shelter with capacity for 100 persons or two shelters for 50 persons for every one lakh urban population.
- The SC Commissioner report of 2011, had mandated compliance of these norms within a two-month period.
- It had also asked for a mapping of homeless population, separate shelters for homeless women, setting aside 30% of the total number of shelters for persons with disabilities, senior citizens or addicts.

How do states fare?

- The 658 shelters are only in 18 states.
- Of these, states such as West Bengal, Uttarakhand, Punjab, Odisha, Gujarat and Chhattisgarh hold a poor record of creating between one to five shelters each.
- The maximum number of shelters, around 200, is in Delhi.

- This is also the direct result of the Supreme Court pulling up the state government in the wake of the mounting homeless deaths in the winter of 2009-10.
- But Maharashtra with a far greater homeless population than Delhi, has created only 14 shelters.
- Uttar Pradesh does not have a single new shelter has been built or existing one renovated under NULM in the state.

What is the reason for poor performance?

- Mumbai has been the biggest defaulter and has been citing the lack of land as the reason for not providing any new shelters for the homeless.
- There is also the underlying prejudice that looks at the homeless as migrants who need not be provided for.
- The poor numbers on ground are matched by the meagre budgetary provisions made for the homeless as compared to housing for the relatively better-off segments.
- The total budget available for constructing new houses under PMAY is over Rs 6,000 crore.
- On the other hand, Rs 349 crore is the total provision for entire the NULM of which Shelter for Homeless is just one of the seven components.
- Therefore what is needed is the ample night shelters and cheap rental units for the homeless. This is how the entire world has dealt with the issue of homelessness.

3.4 ACCESS TO PERSONS WITH DISABILITIES

What is the issue?

- Recently, the Department of Empowerment of Persons with Disabilities (DEPwD) drafted the rules of the new law i.e Rights of Persons with Disabilities Act, 2016 and made available it to the public for comments.
- But they are not published in an accessible format to Persons with Disabilities.

What are the features of the act?

- It covers **21 categories** of disabilities compared to 7 in the 1995 legislation.
- It includes Speech and Language Disability and Specific Learning Disability, Blood disorders (Thalassemia, Hemophilia and Sickle Cell disease), Acid attack victims, Dwarfism and Muscular dystrophy.
- The central government can add three more types of disabilities, if required.
- **Gender perspective** - The bill specifically deals with gender sensitivity in certain chapters like Health, Social Security, and others instead of having a general purpose chapter on gender specific issues.
- **Private sector** - It provides a definite period for all private sectors to make their organisations disability friendly.
- **Disability entitlements** - It ensures all India's validity for disability entitlements by the proposal for a **“universal identity card for the disabled.**
- It specifies a two-year jail term and a maximum fine of Rs 5 lakh for discriminating against disabled persons.
- It also provides **Right to Free Legal Aid** to ensure a better access to justice.

- **Accessibility** - It mandated the respective governments to ensure that all their **public documents are in accessible formats**.

What is Sugamya Bharat Abhiyan?

- India has also launched the Accessible India Campaign (Sugamya Bharat Abhiyan).
- The campaign focuses not just on accessibility to physical infrastructure, but also on Information and Communication Technologies.

What is the underlying problem?

- People with disabilities miss out on information to do with their own lives because of lack of accessibility.
- Both the new legislation and the campaign are focussed on addressing the problem.
- In spite of this, the new rules to the legislation are not made accessible to Person with Disabilities.
- This makes it clearly evident that the attitudinal barriers are here to stay.
- Formulating an ambitious campaign will be ineffective without the attitudinal change in the government.
- Therefore publishing the rules without making them accessible should soon be rectified.

4. GOVERNANCE, TRANSPARENCY AND ACCOUNTABILITY

4.1 SECTION 107A - INDIAN PATENTS ACT

Why in news?

The Delhi High Court has ruled that Indian companies Alembic and Natco Pharmaceuticals can export generic versions of two of German drug maker Bayer's medicines for research and regulatory purposes.

What is the case about?

- Bayer owns the patent of the kidney cancer drug Sorafenib, which is marketed as Nexavar.
- NatcoPharma was given compulsory license to produce the generic version of the drug for the local population, on the payment of royalty to Bayer.
- Nexavar was at that time priced at Rs. 2.8 lakh per patient per month, while Natco's version of the drug was pegged at Rs. 8,800.
- Similar was the case for Alembic Pharmaceuticals which was manufacturing generic form of Bayer's blood thinner drug 'Xarelto'.
- Bayer had initiated proceedings against the two Indian pharma companies to stop them from exporting the drug.
- Indian companies claimed that they were being exported for purposes of experimentation and generation of valuable clinical trial data.
- Bayer had claimed that under the compulsory license provided to Natco, the company could only sell drug 'Sorafinat' within India and export of 90 kilograms of drug worth 3 crore is not covered under the exception provided under Section 107A of the Indian Patents Act, 1970.

What did the Judgment say?

- **Section 107-A** of the Patents Act explains what will not constitute infringement of a patent, and includes selling of a patented invention for the purposes of development.
- The court held that the export of the pharmaceuticals for informational and data gathering purposes is in line with the global Agreement on TRIPS and also covered under the constitutional right enshrined under Article 19(1)(g).
- Thus, the court disposed of Bayer's pleas saying that sale for the purposes prescribed in section 107A would not be an infringement and thus cannot be prevented.

What might happen because of the judgment?

- This could create a rift between the US and India on intellectual property.
- India's Patents Act has been a subject of controversy, particularly Section 3(d), which seeks to prevent 'evergreening' of patents.
- India and the rest of the developed world have sought to use flexibilities in TRIPS to produce cheaper versions of life-saving drugs.
- e.g South Africa has benefited from firms such as Cipla bringing about a drastic reduction in the prices of HIV medicines.
- With the US Trade Representative's IP report card, **the Special 301 report**, is expected later next month, the issue is expected to be brought again.
- The shortage of patents and innovation in India is a larger ecosystem issue, related to the standards of science and technology education.
- But, to attribute inadequate R&D to a weak patents system and to put the health of people over profit would be a gross oversimplification.

4.2 PUBLIC FUNDED PATENT

What is the issue?

- CSIR-Tech, the commercial arm of the Council of Scientific and Industrial Research (CSIR) shut down its operations due to lack of funds.
- One of the reasons is the excessive spending on patents.

How much is spent on patents?

- CSIR has filed more than 13,000 patents at a cost of Rs. 50 crore over the last three years.
- Recently, CSIR's Director-General claimed that most of CSIR's patents were "bio-data patents", filed solely to enhance the value of a scientist's resume.
- CSIR claims to have licensed a percentage of its patents, but has so far failed to show any revenue earned from the licences.
- This compulsive hoarding of patents has come at a huge cost.

What should be done?

- Reckless filing of patents using public funds may be explained by the economic concept of moral hazard which happens when one person makes the decision about how much risk to take, while someone else bears the cost if things go badly.
- Government-funded research organisations are likely to spend more money on patents so long as they are not asked to bear the risk.
- Acquiring Intellectual Property Rights (IPR) also comes out of blind adherence to the idea of patenting as an **index of innovation**.
- In the insurance sector, moral hazard refers to the loss-increasing behaviour of the insured who acts recklessly when the loss is covered by another.
- They check this by introducing co-payment from the insured.
- Similarly, CSIR laboratories need to bear 25% of expenses for their patents acknowledges the moral hazard.

What are the drawbacks in IPR policy?

- The National IPR Policy does not offer any guideline on distinguishing IPR generated using public funds from private ones.
- The IPR policy of some publicly-funded research institutions allows for 30-70% of the income generated through the commercialisation of the patent to be shared with the creators of the invention, i.e., scientists and professors on the payroll of the government.
- Such a policy could promote private aggrandisement and may work against public interest.
- In contrast, the IPR policy of private companies does not allow for a payback on the share of royalties earned by patents.

What should be done?

- A possible solution is to devise an IPR policy wherein patents are initially offered on an open royalty-free licence to start-ups.
- Once start-ups commercialise the inventions successfully, the royalty-free licence could be converted into a **revenue-sharing model**.
- When research is commercialised by private entities, it tends to be sold back to the public at a price.
- It would not only bring a sense of accountability to the managers who run the system but it would also open up publicly-funded research to a whole lot of people, especially start-ups.

4.3 HALDI AND LITCHI CONTROVERSY

What is the issue?

Two stories around haldi (turmeric) and litchi have renewed discussions on scientific rigour and ethics.

What is the Haldi controversy?

- The substance that gives haldi its bright yellow hue is curcumin.
- They have innumerable virtues like anti-inflammatory, anti-malarial, anti-cancer and, as a piggyback on nanofibres to regenerate bone tissues.
- Recently, American scientists have debunked the medicinal value of curcumin in a reputed journal.

- They concluded that there was no evidence regarding therapeutic benefits of curcumin and it is a waste of money on researching it to find a new drug.
- Curcumin may not make for a classical drug going strictly by the tenets of medicinal chemistry, but it certainly qualifies as an ‘adjunct drug’ to treat some infectious diseases.
- So, summarily dismissing curcumin research as wasteful would be like burying a lot of remarkable science around Haldi.

What is the Litchi controversy?

- Turns out, eating Litchi and then not eating an evening meal, could be fatal. It kills a lot of children in Muzaffarpur region of Bihar, the litchi capital of India.
- Recently, a revelation was made in Lancet. Litchi fruits are laden with naturally occurring toxins like hypoglycin A and methylenecyclopropylglycine.
- These could trigger low glucose levels and metabolic derangement among children. The toxins embedded in the fruit reverses all its inherent sugariness.
- The dispute began when a set of scientists alleged that the Lancet study did not follow a basic ethical practice in science i.e., acknowledging similar previous findings.
- It is called as ‘scientific misconduct’. Truly, the Lancet did swung into action to figure out what went wrong in this case.

5. INDIA AND ITS NEIGHBOURHOOD

5.1 PERMANENT INDUS COMMISSION

What is the issue?

India accepts Pakistan’s invitation to the next round of talks for the Permanent Indus Commission in Lahore.

What are the provisions of IWT?

- Under the treaty, **India has full use of the three eastern rivers i.e Beas, Ravi, Sutlej**, while Pakistan has control over the three western rivers i.e Indus, Chenab, Jhelum.
- India is given rights to use the western rivers partially for certain purposes.
- The Permanent Indus Commission mandated to implement the Indus Waters Treaty (IWT) has met every year, since 1960.
- The commission has experts who look into issues and disputes on the ground over the utilisation of the waters of six rivers of the Indus system.

What is the impact of the recent move?

- Doubts had been raised over India’s commitment after the terrorist attack on an army camp in Uri.
- In the days that followed, senior officials announced the suspension of talks until there was an **“atmosphere free of terror”**.
- Prime Minister also made an infamous remark of “blood and water cannot go together”.
- The atmosphere was also charged after the surgical strikes along the Line of Control and subsequent pulling out from the SAARC summit in Pakistan, leading to fears of a freeze in bilateral ties.

- But the current move is a welcome one, as it denotes India's commitment to the treaty that has stood the test of time and war.
- It also displays India's sincerity on the issue of water-sharing, given that the IWT is seen to be a model in dispute management.

What are the other positive moves?

- There has been a marked reduction in LoC firing.
- They both exchanged the annual list of their nuclear installations under a bilateral agreement that prohibits them from attacking each other's atomic facilities.
- There was a release of prisoners by both countries
- India was part of the consensus to elect the Pakistani nominee as the SAARC Secretary-General.
- It is premature to expect anything out of the current move.
- However, they reaffirm the need to keep certain issues such as water-sharing above the politics of the moment.

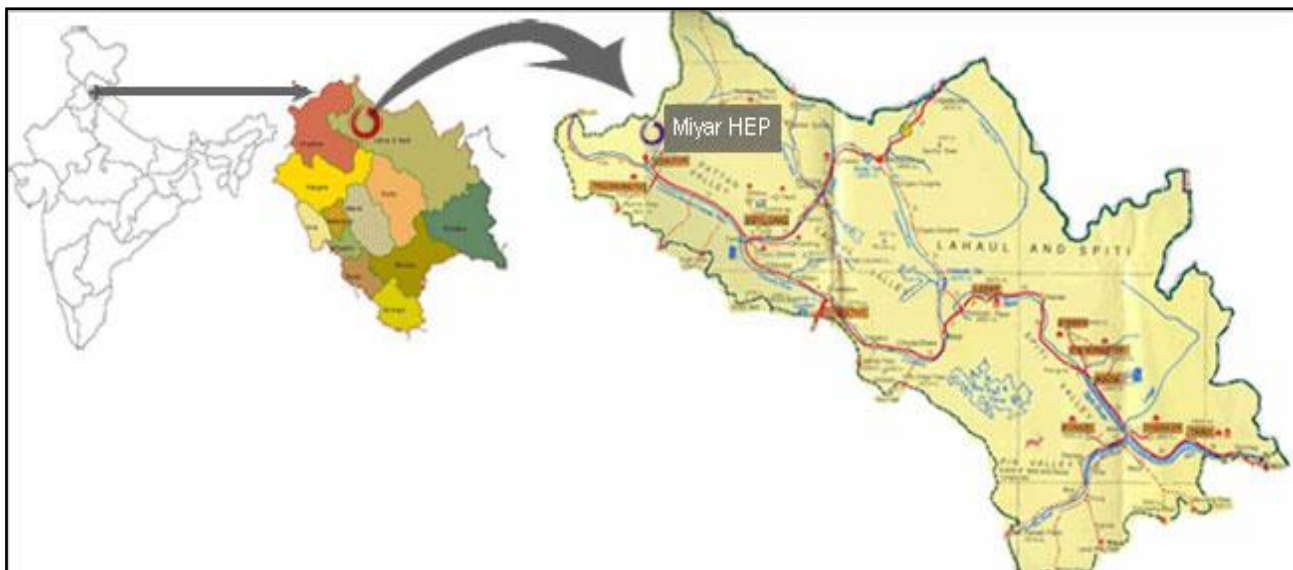
5.2 MIYAR PROJECT

Why in news?

India and Pakistan recently discussed hydroelectric projects and other such issues at the end of two day talks of Indus water commissioners in Islamabad.

What is the issue with the Miyar project?

- Discussions were held on India's proposed Miyar, Lower Kalnai and PakalDul hydropower projects.
- It also includes matters pertaining to exchange of data and conducting tours and meetings of Indus Commission.
- The Miyar Hydropower plant is located on MiyarNallah, a right bank tributary of Chenab River.
- With the 120 MW-capacity it is located in Himachal Pradesh's LahaulSpiti district.
- It is the run-of-the river project with a barrage type structure.
- The design of the Miyar project was received by Pakistan from India in the year 2009.
- Pakistan carried out a detailed review of the design following the guidelines mentioned in the treaty and communicated its objections to India in the same year.
- Pakistan had objected to the placement of spillway, magnitude of pondage, intake and freeboard.
- Pakistan has proposed a surface gated free-overflow spillway design.
- India agreed to change design of the project.



What are the other issues?

- However, on 1,500 MW PakalDul Hydropower plant and 48 MW Lower Kalnai, both sides could not come up with any kind of consensus.
- PakalDul hydropower project was being constructed on the Marusadar River -a major right bank tributary of the Chena River in the Indian held Kashmir.
- It is concrete faced rock fill dam.
- The reservoir will store water every year and release it in the winter season.
- Talking about the 48MW Lower Kalnai, the official said the project was being constructed by India on the Lower Kalnai River, which was also a left bank tributary of the Chenab River.
- Pakistan also raised its concern saying that there should be a mechanism of data exchange to ensure that the reservoir was being filled as per guidelines.
- Besides Miyar and Lower Kalnai, Pakistan has been flagging concerns over designs of India's PakalDul (1000 MW), Ratle (850 MW) and Kishanganga (330 MW) hydropower projects, being built or planned in the Indus river basin, contending these violate the treaty.

5.3 LEAVE POK ALONE

Why in news?

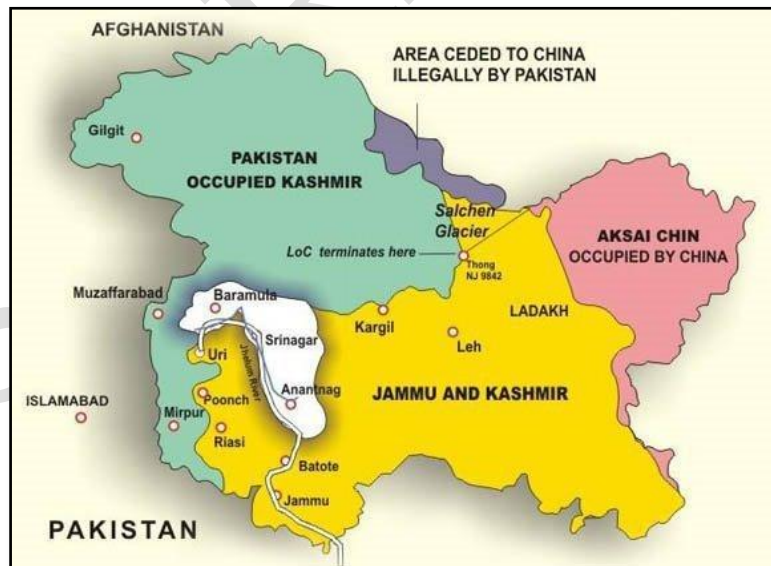
A Bill seeking to reserve seats in Lok Sabha and Rajya Sabha for the people of Gilgit and Pakistan Occupied Kashmir has been listed to be introduced in the Budget session.

What is POK?

- Azad Kashmir is an autonomous administrative territory of Pakistan.
- Gilgit-Baltistan, formerly known as the Northern Areas, is the northernmost province of Pakistan.
- They are together referred to by the United Nations and other international organisations as "Pakistan-administered Kashmir".

How did the POK problem emerge?

- The region under British control was divided into two parts.
- It included areas directly administered by the UK called British India, and those ruled by indigenous rulers under British paramountcy called the princely states.
- During partition, the Indian Independence Act 1947, gave the princely states the options of joining India or Pakistan or remaining independent.
- Hari Singh, the maharaja of Jammu and Kashmir, wanted his state to remain independent.
- Western Jammu province wanted to join Pakistan.
- So the city of Srinagar was attacked by Pakistani guerilla soldiers to liberate it.
- To repel this, Raja Hari Singh of J&K sought the help of the Indian army by signing Instrument of Accession.
- This handed over the control of defence, external affairs and communications to the Government of India in return for military aid.
- Both Indian and Pakistani armies were mobilised.
- Bothe gained control more or less around what is now known as the Line of Control.
- India later approached the United Nations, which mandated the holding of a plebiscite with regard to Kashmir's future.
- This required the withdrawal of the Pakistani Army along with the non-state elements and the subsequent partial withdrawal of the Indian Army.
- This never happened.
- Since then, the issue of PoK has become a much-debated topic.



What is the stand of Pakistan regarding POK?

- In the last several decades, Pakistan has not shown any interest in either peace talks with India or engaging with separatist movements in PoK.
- Earlier attempts by Prime Minister AtalBihari Vajpayee, who undertook the Samjhauta Bus journey to Lahore ended up in the Kargil war.

- The Simla Pact, Agra Agreement and Lahore Declaration all remained ineffective.

Is integration of PoK with India a permanent solution?

- Merely acquiring 13,000 square kilometres of land and embracing all the violent after-effects, is unlikely to bring a sensible solution.
- India devotes about 35% of its annual budget to its defence and security. One of the main reasons for this is the ongoing conflict along the Line of Control in Kashmir.
- If India does indeed get PoK, this spending will increase in order to defend it.
- There are no safeguards to ensure that such a move will translate into long-lasting peace.
- Gaining possession of the disputed land will not ensure its inclusion in the development process. Given the terror infrastructure ingrained in PoK and a section of its population being radicalised, it is unlikely that India will be welcome.
- If a move is made to occupy the disputed land, the flames of terror in the neighbourhood will not only engulf PoK, but we may lose our side of Kashmir as well.
- When we see the issue in its perspective on economic, social, political or technical lines, it becomes more and more clear that the Kashmir issue will not be resolved even if we secure PoK.
- Our focus should be on our side of Kashmir only and the well-being of its people.

5.4 CHINA MAKES BORDER SETTLEMENT

What is the news?

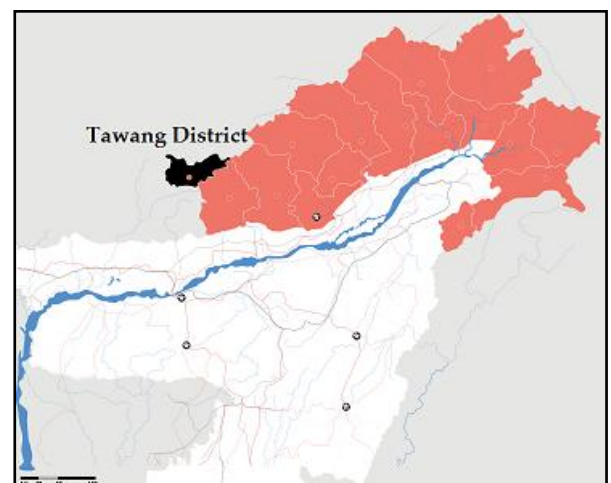
A Chinese special representative, in a recent interview, said if India would compromise on this Arunachal Pradesh track, then Beijing would make similar compromises in the western sector.

What is the Chinese stand?

- Referring specifically to Tawang, a town in Arunachal, the representative said **Tawang is inalienable from China's Tibet** in terms of cultural background and administrative jurisdiction.
- He asserted that **China was not a signatory of the Simla Accord** of June 3, 1914, which established the McMahon line in the eastern sector.
- China is of the view that even British respected China's jurisdiction over Tawang and admitted that Tawang was part of China's Tibet.
- It believes that the Simla Accord, as well as the McMahon Line which it created, are not only unfair and illegitimate, but also illegal and invalid.

What is India's position?

- India said it was better to permanently close the boundary dialogue rather than Beijing raising the issue of Tawang.



- India also said it would assume that China was not interested in settling the Line of Actual Control dispute if Tawang was ever brought to the table.
- Given the importance of Tawang in the four Buddhist schools in Tibet, particularly the Gelug-pa school to which the 14th Dalai Lama belongs, India would never give it up to China.
- Further it will **have to go through a constitutional amendment** requiring the nod of two-thirds of Parliament, which will be politically disastrous for the government that moves the proposal.

Why the Chinese stand is a concern?

- After 1962 war, Chinese withdrew behind the McMahon demarcation in the eastern sector but stuck to its positions in west.
- So, further compromise would mean that the boundary would move from Kunlun to Karakoram watershed.
- The Chinese interlocutors during the border talks conveyed that India would have to make concessions on both sides for a boundary settlement as by now the eastern sector had become important for Beijing.
- The fact is that the **Chinese position on boundary resolution has been shifting** depending on Beijing's strategic ambitions.
- Beijing is also aggressive in its demands, be it on the "One-China policy", the status of the Dalai Lama, the South China Sea, MasoodAzhar's designation as terrorist or membership of the UNSC.
- The recent interview further deepens Indian suspicion about China as the latter refuses to budge over any issue raised by India.

5.5 RECONCILIATION IN SRI LANKA

Why in news?

Recently the UN released a report on the **progress of reconciliation efforts** by the Sri Lankan government.

What did the report say?

- The UN warned that a range of serious abuses, including torture, still appear to remain widespread in Sri Lanka.
- The report said the prevailing **culture of impunity** for perpetrating torture has undoubtedly contributed to this situation.
- It acknowledged that the govt had made positive advances on constitutional and legal reforms, land restitution and symbolic gestures towards reconciliation.
- But it cautioned that the **measures taken so far had been inadequate**, lacked coordination and a sense of urgency.
- It urged the govt and people of Sri Lanka to prioritise justice alongside reconciliation to ensure that the horrors of the past are firmly dealt with and never to recur again.
- Report also made recommendations including urging the govt to prioritise the return of private land that has been occupied by the military, adopt laws allowing the **creation of a hybrid court** and invite the UN rights office to establish a presence in the country.

Where did the present regime failed to act?

- In 2015, when **Sri Lanka agreed to a host of measures at the UNHRC**, including a judicial process to look into the war crimes, hopes were high.
- The present govt also came to power on a promise that he would restore the rule of law, end the country's international isolation and take steps towards reconciliation with the Tamil ethnic minority.
- But, key issues such as establishing a hybrid judicial mechanism and returning the military-occupied lands to Tamil civilians in the north and east still has made no tangible progress.
- Issues such as continuing use of excessive force and arbitrary arrests suggest that the government is either not serious in changing its way or is simply incapable of doing so.
- The delay in providing relief is alienating the govt's allies, **eroding the faith of the public** and also giving more time to the opposition to regroup itself.
- Thus, its time, the present govt seize the moment and swiftly start addressing the core issues.

6. BILATERAL AND INTERNATIONAL INSTITUTIONS

6.1 CONNECTING ASIA'S GROWTH POLE

Why in news?

The vice president of Asian Development Bank highlighted the potentials of integrating South and South-East Asia and the obstacles in this integration.

What are the benefits of this integration?

- India and other South Asian nations, collectively forecast to grow by 7.3% in 2017, can integrate their dynamic economies into the rest of Asia.
- Removing obstacles to trade and investment between South Asia, Southeast Asia and other parts of Asia is the key to erase extreme poverty in the region.
- If South Asia and Southeast Asia each cut non-tariff barriers by 50% and trade costs by 15%, will lead to gains of 8.9% of GDP in South Asia and 6.4% of GDP in Southeast Asia.
- Sub-regions of Asia have their respective weaknesses. So the Asia's growth spurt can be achieved from integrating these regions.

How can the integration be done?

- Myanmar and Bangladesh are ideally located to open the economies on the southern side of Asia and those to the east.
- Therefore the growth should happen along India's east coast, through Bangladesh and Myanmar into the rest of Southeast Asia and China.

What are the causes of concern?

- Only 5% of total trade is done among the South-Asian compared to 35% in East Asia and 26% in Southeast Asia.
- Trade between the economies of South Asia and Southeast Asia climbed from just \$4 billion in 1990 to \$90 billion in 2013. But that is not fast enough and represents only a fraction of the potential gains.
- Building the mutual trust, consensus, and political commitment needed to forge closer trade and transport links will be challenge.

What should be done?

- South-East Asian economies grew quickly even after the global financial crisis through new trade agreements, highways, shipping routes, communications and cross-border logistics. This should be replicated in South Asia.
- South Asia lacks the institutional framework provided by ASEAN, which has galvanized the above mentioned economic integration. SAARC should be strengthened on these lines.
- The trilateral highway connecting India, Myanmar and Thailand will deliver physical connectivity.
- More robust value chains should be developed with Southeast Asia and East Asia to make such movement of goods efficient.
- Market and institutional links are also to be strengthened.
- A host of new economic corridors, like Bangladesh-China-India-Myanmar (BCIM), are another key to connecting Asia's fastest growing countries.

What are the gains for India in the integration?

- ASEAN and India have forged a free trade agreement to deepen trade in goods and services and strengthen investment ties.
- India is partnering with Myanmar to deepen maritime trade by developing Sittwe as a deep-sea port in northern Myanmar.
- The 2,500-km East Coast Economic Corridor (ECEC) along India's east coast links the Visakhapatnam-Chennai industrial corridor into Bangladesh, Myanmar and China and to the ports of Vietnam.
- Matching the strengths of India's northeast in products such as wood, rubber, cement and steel to ASEAN's needs would maximise the ECEC's potential as an eastern gateway.
- There is great scope also for economic corridors connecting India with Nepal, Bangladesh and Sri Lanka, to maximise the export
- For all this to happen, behind-the-border barriers to trade in South Asia need to be addressed, including the better of its infrastructure and regulatory regimes.

6.2 INDIA - U.S. PACT LIKELY TO MISS DEADLINE

Why in news?

The India-U.S pact for building six reactors in A.P. by June 2017 is now facing uncertainty.

What are the issues?

- Indo-U.S. nuclear arrangement is hinged on two major factors.
- **In the East** - The completion of the **India-Japan Nuclear Cooperation Agreement (NCA)**, as Toshiba and other suppliers for reactor parts **are bound by Japanese laws** and by the actual contract to be negotiated by the U.S.-based Westinghouse.
- While the NCA was signed in Tokyo in November 2016, it is yet to be ratified by the Japanese Parliament.
- Even after the India NCA is tabled, we can still expect to see some opposition in Parliament, as this is the first such agreement with a country that has not signed **the Non-Proliferation Treaty**.

- **In the West** - The questions are growing over the impact of a **possible bankruptcy filing by Westinghouse** over massive \$6.3 billion losses the company incurred due to cost over-runs.
- U.S. Embassy declined to comment on how the bankruptcy issues would affect the deal.

What is the history?

- The two sides had agreed to **work toward finalising the contractual arrangements by June 2017** for six reactors to be built in Andhra Pradesh by Toshiba-owned Westinghouse and the Nuclear Power Corporation of India Ltd (NPCIL).
- When completed, this was to be the first operationalisation of the Indo-U.S. civil nuclear deal, which was announced in 2008,.
- It would be a proof that both sides have effectively sorted out all their issues, including **over the liability** that suppliers must accept in the event of an accident.

What does the issue underscore?

- Westinghouse's near-bankruptcy is part of a larger pattern of worldwide cost overruns and delivery delays across the nuclear energy industry.
- The cost of importing reactors, relative to those based on indigenous design, is another concern.
- Land acquisition issues remain, along with the need for large water reservoirs for the reactors, which will only grow if the govt goes ahead with its **plans for 55 reactors of 63,000 MW in total by 2032**.
- In addition, there are concerns about a possible tsunami scenario along the Andhra coast.
- Thus, India had little control over the above mentioned delays. So, rather than seeing the delays as a setback, the government and officials should use this as an **opportunity to re-examine the country's engagement with nuclear energy** for future needs.

What is the way forward?

- With rapid progress in technology in other renewable energy sources such as wind and solar power, the collapse of oil prices and the expansion in gas projects as a viable and clean alternative, that **promise of nuclear power has thus dimmed**.
- Unlike nuclear plants where nothing can be transmitted until the whole plant is complete and attains critical status, in renewable energy, it can be made available in smaller units.
- This is the best time for India's energy planners and government to use the breathing space provided by the delays and take a long, hard look at the cost-benefit analysis on the nuclear power balance sheet.

6.3 INDIA AND CANADA

What is the issue?

The changing world order has necessitated Canada to look beyond its age old partner and create a new trade relationship with countries like India.

What is the present trade scenario?

- Canada's direct investment in India is less than a billion dollars,.
- India's investments in Canada are above \$3 billion.

- Canada’s bilateral goods trade with India is close to \$7 billion, more or less evenly balanced.

How can both countries benefit from the relationship?

- Canada is the world’s tenth largest economy, a member of the G-8 and a major agriculture, food processing and energy powerhouse.
- India at present is the world’s fastest growing economy and also has a huge potential for infrastructural investment.
- India can benefit from Canada’s technological advancement in agriculture, while Canada can make use of India large domestic market for its investment.
- Canadian governments increasing positive gesture towards the Indian origin people and the Indian students have helped it to gain more students from India for educational purpose.
- With the increasing threats from non-state actors, both countries can use their expertise to safeguard each other’s borders.

What should be done by both sides?

- Canada’s recent success in finalising a trade deal with the European Union has sent out a message to India that Canada is firm in its commitment.
- India on the other hand should focus more on enhancing ease of doing business, and trade facilitation measures as agreed to in the Bali Ministerial of the WTO
- Canada is firmly pushing for international arbitration platforms.
- India’s model Bilateral Investment Treaty makes its policy transparent for the stakeholders concerned.
- Thus the Indian government should adopt a more consultative approach with Canadian government to make the trade relationship a win-win for both sides.

6.4 INDIA-MEXICO

Why in news?

The Mexican ambassador to India has invited Indian IT professionals to use Mexico as the base for near-shore US operations, after Trump’s H-1B visa restrictions.

What is the present sceja?

- Mexico is already a major bilateral as well as fast emerging trade partner for India.
- India and Mexico will benefit from higher trade due to the discriminatory policy of Trump presidency.
- India’s exports to Latin America as a whole declined in 2016 but exports to Mexico have increased by an impressive 22 per cent from last year (\$2.77 billion) and doubled from \$1.56 billion in 2012.
- In Latin America, Mexico overtook Brazil (\$2.3 billion) in 2016 as the largest market for India's exports.

Mexican symphony	
India's exports to major destinations in 2016 (in \$ billion)	
Mexico	3.38
Thailand	2.96
Indonesia	3.13
Iran	2.41
Myanmar	2.13
Russia	1.81
Canada	1.97
Australia	2.95
South Africa	3.24
Spain	3.36
Egypt	2.09

- Mexico has emerged as the biggest market for India's vehicle exports.
- Mexico accounts for 13 per cent of India's global exports of vehicles which stood at \$14.98 billion in 2016.
- This is remarkable in view of the fact that Mexico itself exports \$80 billion of vehicles and is the fourth largest exporter in the world.
- India's vehicle exports to Mexico have increased by an incredible 56 per cent from 2015 (\$1.17 billion) from a mere \$397 million in 2012.
- Besides vehicles export, India's exports to Mexico included engineering goods, chemicals, textiles, plastics and pharmaceuticals.
- India's imports from Mexico were \$2.44 billion in 2016, down from \$3.44 billion in 2014 due to the drastic fall in the prices of crude oil which accounts for 60 per cent of India's total imports from Mexico.
- India is the third largest destination for Mexican crude exports which have the potential to increase in the coming years.
- The other major import items are: engineering products, gold, chemicals, optical products, and ores.

Why is Mexico that important?

- Mexico is the second largest market in Latin America with a population of 126 million and a GDP of \$1.15 trillion.
- It is politically stable with democratic credentials.
- The macroeconomic fundamentals are healthy and strong.
- The average inflation in the last decade was just 4.3 per cent.
- Mexico's GDP growth rate in 2017 is projected to be around 2 per cent.
- Mexico is the largest trading nation in Latin America, accounting for about 40 per cent of the region's external trade.
- Its market is open with low tariffs and a predictable, investor-friendly policy regime.
- It has become a manufacturing hub of the Americas with a global leadership position in some consumer appliances; it is competitive in aerospace and high-tech industries.
- Mexico is blessed with rich reserves of gold, silver, copper and other minerals as well as oil.
- Thirteen Mexican companies have invested about a billion dollars in India.
- Around 40 Indian companies have invested in Mexico in pharmaceuticals, auto parts, IT and chemicals.
- Indian companies use Mexico as the platform for access to the markets of North and Central America with whom Mexico has signed FTAs.
- Indo-Mexican trade of \$5.82 billion in 2016 can touch \$10 billion in the next five years.
- Given the importance of Mexico for India's trade, it is imperative for India to sign a free trade agreement to remove tariff disadvantages faced by India's exports vis-à-vis exports from the 45 countries which have signed FTAs with Mexico.

6.5 SCOTLAND - SECOND INDEPENDENCE REFERENDUM

Why in news?

Scottish First Minister seeks second independence referendum.

What are the pros?

- Scotland would have more control over its political destiny. Currently many decisions are taken in Westminster.
- Scotland is more liberal than the rest of the UK and could push forward policies to increase social welfare.
- It could also decide to remain in the EU.
- It could exploit more freely some economic resources, in particular the North Sea oil.
- It would also have more means and freedom to defend its own culture and identity.

What are the cons?

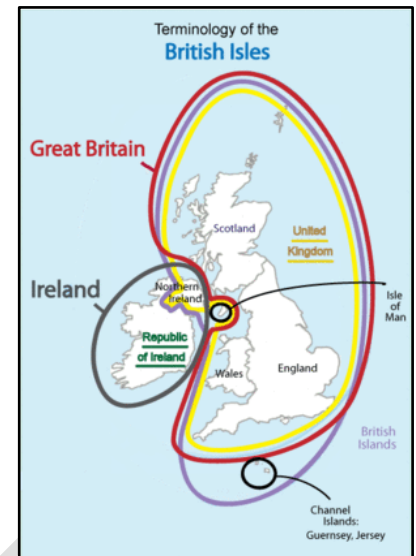
- Scotland may be forced to stop using the Pound (GBP) as its currency.
- Even if it allowed the usage, it would be very dangerous to maintain the currency while not having any control over the Bank of England which is in charge of deciding the monetary policy.
- Both Scotland and the UK would lose political power at international level.
- Scotland could no longer be a part of permanent member of UNSC.
- The independence of Scotland could trigger a wave of separatist movements in Europe, weakening the political union of the continent and creating social and economic uncertainty.
- Many businesses could leave Scotland or at least transfer their headquarters to London as Scotland is a much smaller market than the UK.
- There could be social problems linked to the separation of the countries as there are many mixed families.
- The separation of the countries could also create administrative problems.

Why the demands emerged again?

- In Brexit referendum a clear majority of Scots voted 'Remain'.
- Yet they were forced to leave.
- So the issue of self-determination has been brought back to the political agenda.
- The prospects for a separate Scotland once again revived after British Prime Minister's speech on 17 January 2017 announcing the exit from the single market and customs union.

What are the challenges before Scotland?

- The economic argument of Scotland to leave is at its weakest, as there is decline in oil prices and a huge fiscal deficit.
- A large share of Scotland's trade is within the U.K.



- Scotland's EU entry would have to be ratified by every single member state. But countries like Spain are unlikely to back as they themselves are fighting a long drawn separatist movement.

6.6 TURKISH REFERENDUM

Why in news?

- Turkey is voting on 16 April 2017 on whether to grant President sweeping new powers.
- This fundamentally changes how the country is run.

What is the referendum about?

- The new draft constitution would change the country from a **parliamentary to a presidential republic**.
- It brings following changes -
 1. The President, currently just the head of state, also becomes the head of the executive.
 2. Prime minister post will be scrapped and position of vice president will be created.
 3. The President will be able to issue decrees, **declare emergency rule** and appoint ministers and top officials.
 4. A President will be limited for two, five-year terms.
 5. Parliamentary and presidential elections will be held every five years, on the same day.
 6. Parliament will be able to investigate or impeach the president via a majority vote in parliament. It would need a two-thirds majority to send the president to trial.

How did Turkey get to this stage?

- In 2007, Turkey embraced a semi-presidential system, putting the election of the president to a public vote.
- But there was a desire to move to a fully presidential system.
- The failed coup attempt was taken as the opportunity by Turkish President.

What are the arguments in favour?

- Turkey's security is threatened by wars in neighbouring Syria and Iraq and a spate of ISIL and Kurdish militant attacks.
- So the supporters view the plans as a guarantee of stability.
- It is also seen as an attempt to modernise Turkey's constitution.
- Proponents also say it will improve decision-making.

What are the arguments against?

- There is abolition of parliamentary accountability.
- It is seen as the erosion of the separation of powers i.e there will be no checks and balances on Turkish President's power.
- He will be head of state, head of government and have full power over the judiciary.
- He will have the power to issue decrees, which is huge, because it pretty much makes parliament ineffective.

What about the relations with the EU?

- Turks living in Europe are also eligible to vote in the referendum.
- Turkish President's allies drew up plans to organise rallies in European cities to mobilise support among the turks living there.
- Several European countries like Austria, Switzerland, have banned such rallies due to raising security concerns and fear of domestic political repercussions.
- They also fear that Turkish President's outreach could help the anti-Muslim far-right parties in the continent.
- The EU needs Turkey in terms of its help with controlling migration into Europe.
- Turkey needs EU, because EU is its biggest trading partner.
- The Turkish President might win short-term political dividends from this ongoing spat, but in the longer run he is endangering both Turkey's ties with Europe and the prospects of the thousands of Turks living in the continent.

6.7 AMERICA'S NEW TRADE POLICY AGENDA 2017

Why in news?

America had released a new Trade Policy Agenda 2017, which sets to identify and crack down on such trade partners with whom the US runs a big trade deficit, and force them to shrink it.

What is a trade deficit?

- Trade deficit is the excess of a country's import bill over its export receipts.
- E.g : The US trade deficit of \$502 billion in 2016 means that the country spent \$502 billion more on importing goods and services from other countries last year, than it earned by exporting.
- US Trade Deficit with other country
 1. China - \$300 billion
 2. Germany - \$68 billion
 3. Mexico - \$62 billion.
 4. India - \$30 billion.
- The US is hoping that by imposing high import tariffs on trade partners who run a large deficit with it, it can force global manufacturing giants to relocate their factories back to its shores.
- By putting pressures on countries such as China and India to dismantle their import barriers, it can also access new markets for American goods and services thereby reducing its trade deficit.

What is the trade deficit for India?

- India runs a trade deficit, with its import bill on crude oil, precious metals, electronic goods and other items, far exceeding its export earnings.
- In April to December 2016, India's trade deficit was \$76 billion.
- Just like the US, India too is keen to shrink its trade deficit, especially the one with China.

Why is trade deficit important?

- Running a persistent trade deficit has following adverse effects on the economy.
- The country's demand for dollars (foreign exchange) will be greater than the supply. This leads to steadily weakening home currency i.e depreciation.
- It forces a country to constantly look to foreign investors to make up the gap between its export earnings and its import payouts.
- It could be an indication that domestically produced goods are unable to compete against imports. If local factories shut down, that leads to job losses.

What is the effect of US agenda on India?

- US is one of the few countries with which India runs a trade surplus.
- A reversal of this trade balance could trouble the exchange rate.
- India's exporting and importing sectors will face new hurdles.
- The Indian software professionals in US are already on the verge of getting expelled from US due to the recent H1B visa issue.
- Exporters of agri-commodities, textiles and apparel are soon likely take a hit.
- It is also not good for India's young population looking for jobs.

6.8 WTO CRISIS

What is the issue?

The 2017 Trade Policy Agenda of the US has created a crisis for the WTO.

What is WTO?

- The World Trade Organization (WTO) is an intergovernmental organization which regulates international trade, headquartered in Geneva.
- It was officially commenced under the Marrakesh Agreement replacing the General Agreement on Tariffs and Trade.

What the Trade Policy Agenda says?

- It emphasises that a major thrust of future US trade policy would be resisting efforts by other countries or Members of international bodies like the World Trade Organization (WTO) to advance interpretations that would weaken the rights and benefits of the various US trade agreements.
- It spells out that the new administration would firmly defend American sovereignty in trade policy issues.
- This makes it clear that WTO's rulings would not necessarily lead to changes in US policies.
- The Trump administration disregards multilateral and regional trade frameworks and prefers bilateral trade deals.
- It has little interest in projecting itself as committed to multilateral and regional initiatives.
- The earlier US administrations, while ensuring US remains the major driver of global trade policy, didn't abandon collective rule-making.

What will be the consequences?

- The WTO has just got its biggest success in several years by implementing the Trade Facilitation Agreement (TFA) in goods.

- If the world's largest economy begins disrespecting the WTO's dispute settlement, it might encourage others to follow suit and the progress made would be reversed.
- This would also mean a **decline in commitment to economic multilateralism**.

How China reacted?

- China has affirmed its faith in the WTO and the multilateral trade framework soon after the US went public with its trade policy.
- China move to position itself **as a supporter of multilateralism and global trade order** would enable it to attract considerable political capital, particularly support from poor and small economies.

IAS PARLIAMENT

GS PAPER III

7. INDIAN ECONOMY

7.1 AMENDMENTS TO THE FINANCE BILL, 2017

Why in news?

Lok Sabha made several amendments to the Finance Bill 2017 and passed.

What is a Finance bill?

- It typically includes provisions that give effect to the imposition of a tax or a change in existing tax rates such as a lowering of income tax, changes to customs or excise duties etc.
- Finance Bill is essentially a Money Bill and so it only needs the approval of Lok Sabha.
- Rajya Sabha may only make recommendations.
- If Rajya Sabha does not pass the Bill within 14 calendar days, it is deemed to be passed.
- It is different from Financial Bill, which involves matters in Article 110 along with other matters and hence can be resolved by Joint Sitting in case of deadlock.

What were the proposed amendments?

- **Aadhaar mandatory** - It has been mandatory for every person to quote their Aadhaar number while applying for a Permanent Account Number (PAN), or filing their Income Tax returns.
- In case a person does not have an Aadhaar, he will be required to quote their Aadhaar enrolment number, indicating that an application to obtain Aadhaar has been filed.
- **Tribunals** - Certain Tribunals are proposed to be replaced, and their functions are proposed to be taken over by existing Tribunals under other Acts
- Currently, terms of service of Chairpersons and other members of Tribunals, Appellate Tribunals and other authorities are specified in their respective Acts.
- Amendments propose that the central government may make rules to provide for the (i) qualifications, (ii) appointments, (iii) term of office, (iv) salaries and allowances, (v) resignation, (vi) removal, and (vii) other conditions of service for these members.
- **Corporate Funding** - Currently, a company may contribute up to 7.5% of the average of its net profits in the last three financial years, to political parties.
- It has to disclose the contributions made to political parties in its profit and loss account, along with the name of the political parties.
- The amendments propose to remove the 7.5% limit and the requirement of a company to disclose the name of the political parties.
- The contributions will have to be made only through a cheque, bank draft, electronic means, or any other scheme notified by the government.
- It contains provisions to introduce electoral bonds to make contributions to political parties.

- **Cash Transactions** - The cash transactions above two lakh rupees will not be permitted to a single person in one day, for a single transaction and for any transactions relating to a single event.
- **Power to impose penalty** - The Securities Contracts (Regulation) Act, 1956 and the Depositories Act, 1996 were amended in 2004 to empower the adjudicating officer to impose penalties on offenders for various offences including their failure to furnish information, documents or returns.

What are the issues?

- It has broad spectrum legislation encompassing subjects way beyond the the scope of Article 110.
- By passing it as Money Bill, the government ignored the collective wisdom of the Rajya Sabha.
- It introduces draconian provisions giving unfettered power to taxmen to search and seize without any real accountability .
- It allows taxmen to clutch at much more than is required in name of tax compliance.
- It converges unconnected Appellate Tribunals on an imagined synergy e.g airport regulatory appellate with telecom appellate.
- Section 179 empowers the government to make rules for all terms of service, including appointment, salary and removal of members and chairpersons of Tribunals etc. This subjects substantive powers and privileges of tribunals to delegated rule making control of the executive.

What is the difference between Bill and rules?

- A Bill passed by Parliament includes the broad regulatory framework and principles governing the sector.
- It allows the government i.e the executive to specify the details of implementation through rules.
- This is to address the need for expediency and flexibility in implementation of laws.
- While a Bill requires parliamentary approval in order to be enforced, rules do not require such approval.
- The current move lowers the threshold of parliamentary scrutiny.

7.2 INSOLVENCY AND BANKRUPTCY

What is the difference between Insolvency and Bankruptcy?

- Though the terms are used interchangeably, insolvency and bankruptcy are not synonymous.
- The line of difference is thin, **bankruptcy being a legal option**, if the insolvency is not addressed.
- Insolvency is a state of affairs in which the financial difficulties of a company are such it is unable to run its business at its current pace.
- Warning signs could be drop in sales, delay in payments, erosion of share capital and increasing reliance on credit.
- But **insolvency is capable of being managed or resolved** and a company does not have to declare bankruptcy.
- Most developed economies have recourse to debt management, consolidation or restructuring schemes as alternatives to bankruptcy in dealing with insolvency.
- **Bankruptcy laws are more rehabilitation oriented.**

- Companies are more valuable while operational, than sick or dead, and business should not be held to ransom by a few creditors.
- Yet showing too much tolerance to defaulters sets a bad precedent.
- If the existing framework is unable to provide effective rehabilitation or speedy recovery, then it needs to be trashed.

What are the issues with Indian laws?

- The Indian Bankruptcy regime is still rooted in the Companies' Act, 1956.
- The processes are **sluggish and cumbersome**, and very often productive assets lie dormant and eventually perish.
- Existing Insolvency laws are unconsolidated. The archaic **Provincial and Presidency Towns Insolvency Acts** which pertain to individual insolvencies continue to govern SMEs.
- India's Insolvency regulator, the Board for Industrial and Financial Reconstruction (**BIFR**) has been a nightmare zone for sick industrial companies as defined under the **SICA, 1985**.
- The SARFAESI brought relief to a class of secured creditors, but it's not a substitute for an 'insolvency regime'.
- High expectations are pinned on the Companies Bill, which has promised a insolvency rehabilitation fund and a regime based on the UNCITRAL Trade law model.
- Unfortunately, the Indian experience in adopting UNCITRAL model has not been positive.
- While relying on global best practices for guidance, they have rejected the Indian committee centered approach and adapted the American model to fast track timeframes and early exit options.

7.3 GDP SURPRISE

Why in news?

CSO has released the data for the third quarter of 2016-17 (Oct-Dec) and concluded that the GDP in Q3 grew by 7% and the growth rate for the whole year would be 7.1%.

Did demonetisation impact economic growth?

- The CSO data did not answer that question.
- The argument that demonetisation did not and will not have a negative impact on the economy is very hollow and immature.
- Even the former CSO chief statistician, after reviewing the data, has concluded that the data (of 3rd quarter) is deficient and the growth rate for the whole year is likely to be revised downward to 6.5%.
- After the **changeover to the new methodology**, the CSO publishes estimates of Gross Value Addition (GVA) and GDP.
- GVA growth rates during three years is given below:

	2014-15	2015-16	2016-17
Q1	7.26	7.75	6.89*
Q2	7.91	8.44	6.69*
Q3	6.29	6.95	6.61
Q4	6.19	7.42	?
Whole year	6.94	7.83	6.67 (est)

*after downward revision

- **Demonetisation affected every sector of the economy except three.**

1. **it did not affect government expenditure.** And the govt actually increased its spending after November 8, 2016;
 2. **it did not affect the monsoon.** Since it was bountiful, it boosted agricultural production; and
 3. **it did not affect the revenues of utilities.** Actually demonetised notes were allowed to be used for paying utility bills.
- Therefore, if we look at the GVA growth rates after excluding government, agriculture and utilities, it will show the real picture of the economy. And it looks like this:

	2015-16	2016-17
Q1	9.26	7.35
Q2	9.82	6.47
Q3	9.98	5.73
Q4	8.76	?

What conclusion can be made from above?

- From the above data, it is clear that economic growth in the non-government, non-agricultural economy slowed down since Q4 of 2015-16.
- Demonetisation that happened in the middle of Q3 actually **accelerated the decline of economic growth.**

Why the situation is still bleak?

- While the GVA/GDP data may have given a surprise, other **indicators point to an economy that is not investing more**, not producing more and not creating more jobs.
- Compare the GVA growth numbers in Q3 of 2015-16 and Q3 of 2016-17. In the Mining, Manufacturing, Construction, etc., the GVA growth number has declined sharply in 2016-17.
- In Q3 of 2016-17, the Index of Industrial Production (IIP) recorded a meagre growth of 0.2%.
- Bank credit growth to industry was negative at 4.3%.
- By September 2016, net fixed assets of all firms had declined by 9.36%.
- When data for the informal sector is also captured, the GVA growth number will be moderated and will be lower.

7.4 GST INTRODUCTION

How sales tax used to work?

- **Example 1**
- **Stage 1** - Imagine a shirt manufacturer. He buys raw material worth Rs 10,000, for which he pays a sales tax of 10% i.e Rs.1000.
- He manufactures shirts by adding value of Rs.5000 including profit.
- **Stage 2** - While calculating the total cost, the manufacturer will include 10,000 + 1000 + 5000 and fix the price as 16,000.
- The customer buying will pay 16,000 + 10% sales tax i.e 1,600 resulting in the final cost of 17,600.
- $1600 = \text{Rs.}1000$ as tax on 10,000 (collected for the 2nd time) + Rs.100 as tax on 1000 (tax on tax) + Rs.500 as tax on 5000 (tax on value added)
- So the total tax collected by the government in both the stages is 2,600.

What were the flaws in it?

- It collected the sales tax of Rs.1000 on initial Rs.10,000 goods twice.
- It also had cascading effect i.e collected Rs.100 as tax on tax.
- This also increased the final price of the product, making it difficult for the end customer to pay.
- Unlike direct taxes, higher indirect taxes like sales tax will affect the poor more than the rich.
- To avoid the higher tax, people used to transact without invoice hence resulting in higher tax evasion.

How did VAT solve the problem?

- VAT is sales tax introduced with the promise of reimbursing the seller with the tax he paid at the earlier stages.
- **Example 2** –After application of VAT in **stage 2** of Example 2, while calculating the total cost of the product, the seller includes 10,000(raw material) + 5000 (value added) only. He leaves out 1000 paid as tax in the previous stage because it will be reimbursed by the government.
- So the customer buys at the cost of 15000 + 10% VAT i.e 16,500.
- Here the tax government is 1500.
- Thus the VAT successfully reduced the tax rate and removed the cascading effect.
- The tax is reimbursed by input tax credit.
- It is the credit manufacturer's received for paying input taxes towards inputs used in the manufacture of products. Similarly, a dealer is entitled to input tax credit if he has purchased goods for resale.
- Input tax credit = Tax collected by the Seller - Tax paid by the Seller.
- e.g A seller paid Rs.2000 as tax for buying 200 units of pen. He sold 100 units in a month and collected only Rs.1000 tax from the customer. So Input tax credit is $2000 - 1000 = 1000$. So the seller will be having Rs.1000 in his credit. Next time when he pays tax this amount is subtracted.

What are CENVAT and MODVAT?

- VAT removed the cascading effect only in sales tax.

- The cascading effect continued in other indirect taxes like excise duty, service tax etc.
- So to remove this MODVAT was introduced. It works in the same principle like VAT and provides input credit to Central Excise Duty.
- Later CENVAT replaced MODVAT and it provides input credit to Central Excise Duty along with the Service Tax.

What is the need for GST?

- Input credit facilities were available for few types of taxes.
- Electricity, Petrol, Advertisements were not included in State VAT resulting in continuation of cascading effects in these areas.
- The input credit facilities available for CENVAT and State VAT cannot offset each other resulting in maintaining multiple accounts and multiple credits.
- Different tax rates were applied across states resulting in complication of business transactions.

What is GST?

- GST is one indirect tax for the whole nation, which will make India one unified common market.
- It is a single tax on the supply of goods and services, right from the manufacturer to the consumer.
- It is a destination based tax i.e will be collected at the state where the goods are sold instead of the manufacturing states.
- In India, GST Bill was first introduced in 2014 as The Constitution (122nd Amendment) Bill.
- This got an approval in 2016 and was renumbered in the statute by Rajya Sabha as The Constitution (101st Amendment) Act, 2016.
- The provisions are -
 1. Central GST to cover Excise duty, Service tax etc, State GST to cover VAT, luxury tax etc.
 2. Integrated GST to cover inter-state trade. IGST per se is not a tax but a system to co-ordinate state and union taxes.
 3. **Article 246A – States have power to tax goods and services.**
 4. **Article 279A-** GST Council to be formed by The President to administer & govern GST. It's Chairman is Union Finance Minister of India with ministers nominated by the state governments as its members.
 5. The council is devised in such a way that the centre will have 1/3rd voting power and the states will have 2/3rd.
 6. The decisions will be taken by 3/4th majority.

What are the taxes that are currently exempted in GST?

- Custom duty will be still collected along with the levy of IGST on imported goods.
- Petroleum and tobacco products are currently exempted.
- Excise duty on liquor, stamp duty and electricity taxes are also exempted.

What are the advantages of GST?

- It makes the taxation simple.
- It promotes exports. Zero rated exports i.e full tax credit will be given for exports.

- No/Less cascading effects.
- It will increase job creation and promote MSMEs. Currently, Big Companies make their spare parts themselves to avoid indirect taxes in between manufacturing. Now these businesses will be delegated to smaller MSMEs.

What are the challenges?

- SCGT and CGST input credit cannot be cross utilized.
- Manufacturing states loses revenue on a bigger scale.
- High rate to tax to compensate the revenue collected now from multiple taxes i.e High Revenue Neutral Rate.

7.5 GST BILLS

Why in news?

- Goods and Services Tax (GST) is proposed to be implemented as a new, consolidated indirect tax regime from July 1, 2017.
- Lok Sabha passed four Bills, relating to the implementation of the GST.

What are the new bills passed?

- The Central GST Bill, the Integrated GST Bill, the GST Compensation Bill, and the Union Territory GST Bills are the four new bills.
- The fifth legislation i.e the State GST Bill, will be passed by the Assemblies of each of the States and the Union Territories with legislature.

What were the objections made to the bill?

- The disempowerment of Parliament in setting tax rates as GST council will be formed for this purpose.
- There is still need for several tax rates when the principle is to be of 'one nation, one tax'. The ceiling rates are expected to be 0%, 5%, 12%, 18% and 28%.
- The reduction in the fiscal autonomy of the States.
- The uncertainty over the addition of petroleum products, land etc. under GST.
- Concerns raised by banks and insurance companies over the need for multiple registrations under GST.
- The levy of additional cess.
- The law allows the States leeway to depart from a recommended SGST rate. Therefore, the challenges ahead lie in GST Council's leadership skills to carry everyone along.
- The monthly filing of GST returns is 'auto-populated' – which means that a registered supplier must upload all details of his transactions, with the tax element.
- Such humongous data gathering has not been attempted elsewhere, and the software should be tested.
- The capacity of State tax authorities, so far used to taxing goods and not services, to deal with the latter is an unknown quantity.
- The success of GST depends on political consensus, technology and the capacity of tax officials to adapt to the new requirements.

What is the justification of the government?

- **Parliamentary power** - The recommendation of the rates will come from the Council but the GST Council has been given the power to only make a recommendation regarding the model law.
- The Constitutional amendment gave that power in Article 279A. The plenary power to frame legislation can only be with Parliament or the state legislative assemblies.
- **State Autonomy** - The Council has two-thirds voting by the States and one-third by the Centre.
- But the states and the Centre must be guided by the federal nature of the agreement between the Centre and the states.
- If every state decided not to act on the GST Council's recommendations and set a different rate, then the implementation of GST become practically very difficult.
- **Multiple Rates** - If there was only a single rate, then the GST regime would be a highly regressive one as luxury goods would then be taxed at the same rate as necessities.
- **Real Estate** - The Council had taken a decision that the aspect of bringing the real estate sector under GST would be reviewed in the first year of rollout.
- **Petroleum Products** - The Constitution provides that these items would attract GST, though the rate has been kept at zero.
- Going forward, it would require only an executive decision on setting a rate on petroleum products.
- **Multiple Registrations** - A clause has been provided that can provide an exemption in exceptional circumstances and the GST Council will take a call on it.

7.6 GST PRINCIPLES

What is the issue?

- Items are to be assigned to the different GST slabs and the exact amounts of the cesses will be decided.
- The actual rate structure has already become overly complicated and has to be addressed.

What should be the GST's principle?

- The guiding principle cannot be to minimize departures from the status quo.
- Instead, the principle must be to make GST facilitate compliance, minimize inflationary pressures, be a buoyant source of revenue, and command support from the public at large.
- The GST is a consumption tax, so any differentiation of rates should be minimal and should be linked to protecting the consumption basket of the poor while imposing a greater burden on the rich.
- GST should not to be coupled with multiple objectives like such as employment, industrial policy, and social engineering.
- Another general point and one that will pose a communication challenge is this: today's headline tax rate is not the actual tax burden felt by the consumer. What you see is NOT what consumers get. So, if the government imposes a GST rate that seems greater than today's rate (excise plus VAT combined), it does not necessarily follow that the tax burden has gone up. The reason is that today there are a lot of embedded taxes (the so-called cascading).

- **Tax Structure** - The top rate has been proposed to be at 28%. This can be reduced to a combined rate of 20%.
- If this is not feasible and multiple rates of 18% and 28% are here to stay, the number of goods that are placed in the 28% slab must be kept at an absolute minimum.
- The bulk of consumer goods that are currently envisaged to be in the 28% category should be moved to the 18% category.
- The 28% slab should include only the demerit goods like air-conditioners and cars.
- Centre should bargain to lower the compensation threshold (from say 14% to 12%) if states insist on placing goods in the lower rate slabs.
- Our tax policy and system must minimise the differentiation between a good from a service. A single rate will also avoid misclassification between services. If services are also allocated between the different rates, the result will be a messy system with multiple categories for both goods and services.
- **Textiles and Clothing** - If India is to become a serious clothing exporter the GST must provide for a simple structure. All textiles and clothing products should be subject to the standard 18% tax.
- **Gold** - Gold should be treated like any other item of luxury consumption. The government should to repeat its resolve shown in levying 1% excise duty.
- But the argument that high tax can lead to evasion has some merit in the case of a high value product such as gold.
- Currently, even though the total headline tax on jewellery is 2%, the effective burden faced by consumers is about 10-12% because of cascading and non-availability of input tax credits.
- So there would be no increase in burden if the GST rate is set at 12% (with free flow on input tax credits). It would not make any sense if gold and gold products were taxed at anything below a GST rate of 12%.
- **Tobacco products** - Today most tobacco products are taxed at very high rates reflecting their potential to cause cancer and other diseases.
- Bidis on the other hand attract very low taxes in some states on the grounds that bidis are made in the small-scale sector and lead to livelihoods for millions.
- This is a classic case of multiple objectives leading to distortionary taxation. In consumption, bidis are no less harmful than cigarettes.
- So, the GST as a consumption tax should treat the two similarly.
- The objective of helping bidi workers should be addressed through other fiscal tools such as subsidies.
- Some states such as Karnataka and Rajasthan that tax bidis heavily others like West Bengal have low levels. This should be uniform.
- **CVD and SAD exemptions** - Currently, numerous exemptions are granted on Countervailing Duty (CVD) and Special Additional Duty (SAD) levied on imports which favour imports over domestic production. Under the GST, both will be combined and a uniform IGST will be applied on imports. If any import IGST exemptions are allowed under the GST (to mimic the current CVD and SAD exemptions) that would make a mockery of the PM's Make in India initiative.

- GST suffers from weaknesses largely related to the exemption of so many items from its scope like alcohol, petroleum, electricity, land and real estate, health and education. In order to minimize the damage, at least the structure of rates on those products not excluded should be low, simple, and efficient.

7.7 INDIA'S TAX NET PARADOX

What is the issue?

- The Finance Minister in his Budget speech this year claimed that India is “a tax non-compliant society and too many people evade taxes”.
- Prime Minister stated that “only 24 lakh Indians reported an income greater than 10 lakh rupees.
- Former Finance Minister in his 2013-14 Budget speech said that “only 42,800 persons admitted to an income of more than Rs.1 Crore per year”.

What is the reason behind this scenario?

- India's per capita GDP is roughly Rs. 1 lakh, i.e. the average Indian earns a lakh of rupees every year.
- However, the income tax exemption threshold in India is Rs. 2.5 lakh, i.e. anyone earning below Rs. 2.5 lakh need not pay income tax.
- A majority of Indians earn less than Rs. 1 lakh.
- Therefore an income tax exemption threshold of Rs. 2.5 lakh leaves a vast majority out of the tax bracket
- NSSO survey says that the average income of the richest 20% of Indians is Rs. 95,000.
- This means that even a large majority of the richest 20% of Indians do not qualify to pay income taxes.
- Thus the low tax compliance turn out of only 3% of Indians pay tax, is not because of a large number of Indians avoiding tax, as portrayed.
- It is merely due to the fact that India is a poor country with a high income tax exemption threshold.
- Adding to this is India's large income inequality - a greater majority of Indians earn less than Rs. 1 lakh while a small number at the top earn a very large amount.

Why India has less people in Income tax bracket?

- India has increased the income tax exemption threshold from Rs. 40,000 to Rs. 2.5 lakh in the last two decades.
- China has only doubled the threshold from 10,000 Yuan to roughly 20,000 Yuan in the same period, in spite of faster growth.
- It is the only large economy with an income tax exemption threshold that is 2.5 times the average national per capita income.
- In emerging economies such as China, Brazil and Argentina, anyone earning 1.5 times the average national income falls under the income tax bracket.
- If India lowers its income tax exemption in line with the rest of the world more Indians will fall under the tax bracket.
- But given the income levels, this reduction will not fetch any meaningful extra tax revenues for the government but will merely bring more people into the tax bracket.

What is the global scenario?

- Even in the much richer United States, only 12.5 lakh people out of nearly 20 Crore adults reported an income greater than 10 times the per capita GDP of the U.S.
- In the United Kingdom, only 2 lakh people out of an adult population of 4 Crore reported an income of greater than 10 times the average annual income
- The developed nations examples proves the existing low tax compliance issue in India
- Therefore it is wrong to conclude that India's small number of taxpayers is entirely a result of some genetic and cultural trait of dishonesty of Indian society at large.
- The proclamation of India as a tax non-compliant society can be true only when India is much richer than her GDP numbers.

7.8 CHARGING THE CASH TRANSACTIONS

What is the issue?

India's top three private banks - ICICI Bank, HDFC Bank and Axis Bank, have started charging customers a transaction fee for cash withdrawals and deposits at their branches.

What are the impacts?

- Customers will now have to pay a minimum of Rs 150 for every additional cash transaction at the branch after the first four transactions.
- India's largest bank, the SBI, is also set to charge customers Rs 50 for cash deposits beyond three such transactions in a month.
- The move to impose charges has been incorporated to promote digital payments in alignment with the government's broader push on digital economy.
- A digital economy is expected to further tax compliance and, in turn, higher revenues.
- But the move comes at a time when the latest RBI data shows a month-on-month decline in electronic transactions in the months of February and January.

Is the justification valid?

- Forcing people to switch to digital forms of payment by levying steep charges can't be an optimal solution.
- The use of cash is still widespread and with a large unbanked population and informal sector.
- Banking is still a privileged business where regulators allow a limited number of entities after making sure that they are the ones customers can trust.
- One of the accepted principles of good regulation is weighing the costs to customers against the perceived benefits, of a proposed move.
- By this logic the current move is more detrimental with less benefits.
- A competitive financial system does have its benefits.
- But banks ought to also fulfil some of the aspirational needs of the country.
- The RBI's mandate is also to extend customer protection.

- Therefore the government need to step in and ensure the right balance between state policy and consumer rights.

What is the way ahead?

- A better way for banks to promote digital payments is to offer incentives to consumers and firms to shift to digital platforms.
- Instruments like transaction fee may lead to cash hoarding, put off potential customers and render financial inclusion an even more difficult task.

7.9 SUSTAINING EXPORTS

Why in news?

The trend of contraction in exports has been arrested, following six straight months of growth.

What are the reasons behind the growth?

- There has been 17.5% year-on-year rise in February 2017, the highest expansion since October 2011.
- This will also be the first time since 2013-14 that India's exports growth is likely to end the fiscal year on a positive note.
- The recent growth has been led by a sharp jump in a few items such as iron ore and engineering goods.
- The impact of recovery in oil prices also helped India's exports earning from petroleum products as well as demand for Indian goods from oil-rich nations in West Asia.
- But its influence on full year exports may be neutral.
- This will also lead to a jump in India's import bill, because crude oil is the nation's largest import.

What is in the future?

- Oil prices have once again softened recently due to doubts over effectiveness of production cuts mandated by the Organisation of Petroleum Exporting Countries.
- Such volatility in oil prices may once again lead to a widening of trade deficit, as imports continue to rise much faster than exports.
- There is also increasingly protectionist approach worldwide as opposed to more integrated on trade.

What should be done?

- The only way to help exports grow is by becoming more competitive through lower costs.
- The US is the largest destination for Indian exports accounting for about 15 per cent of outbound merchandise.
- The good news is that India's exports to Asian nations, including immediate neighbours such as Nepal, and to Vietnam and Malaysia have been rising.
- Additional efforts to increase demand in these countries will stand India in good stead.
- It also needs to further diversify its geographical spread given the risk posed by a possible US protectionist policy.

7.10 WORLD HAPPINESS REPORT 2017

Why in news?

World Happiness Report 2017 was released recently at the United Nations at an event celebrating International Day of Happiness.

What are the criteria for the ranking?

- The happiness rankings are based on six factors.
 1. GDP per capita
 2. Healthy years of life expectancy,
 3. Social Support,
 4. Trust (measured by a perceived absence of corruption),
 5. Perceived Freedom to make life decisions &
 6. Generosity (measured by recent donations).
- The 2017 report also included a chapter on 'Happiness at Work' as the numbers of hours spent at work are usually a big part of people's lifetimes.

What are the findings of the report?

- Norway emerged at the top, displacing three-time topper Denmark.
- Denmark dropped to second place, followed by Iceland, Switzerland, Finland, the Netherlands, Canada, New Zealand.
- Australia and Sweden are tied for ninth place.
- The US came in 14th place, dropping one place bottom-most countries on the 155 countries list are Burundi, Tanzania, Syria, Rwanda and the Central African Republic.
- The report finds that the overwhelming importance of having a job helps in inducing happiness.
- People with a job evaluate the quality of their lives much more favourably than those who are unemployed.
- The data also shows that rising unemployment negatively affects everyone, even those still employed.

Where does India stand?

- India is among the world's least happy nations.
- It always stood lower than Pakistan, China and Bangladesh.
- Its ranking has been declining steadily from 111st in 2013 to 118th in 2016.
- It is now ranked at 122 out of 155 countries, irrespective of the progress in per capita GDP over these years.

What are the reasons for the poor ranking?

- **Economy** - There is a huge disparity in the purchasing power of the Indian population.
- Nearly 1/4th of the population still lives below the poverty line.
- Though, economics are not the only indicator of happiness, it is a necessary factor.
- Poverty also brings malnutrition and abysmal public health for a huge section of the population.

- **Opportunities** - India lags in access to education beyond higher secondary schooling is restricted to a mere 10% among the university-age population in India.
- The disparity exists across genders, socio-economic religious groups and geographical regions.
- Fewer higher education institutions necessitate fierce competition among scores of contenders, inducing undue amounts of stress on young students.
- This combined with social perception of success and pressure to keeps a majority of young individuals from reaching a place of satisfaction and stability.
- **Women Safety** - Lack of safety and security to women is also a key factor to low societal happiness.
- According to NCRB, crime against women grew by 34% between 2012-15.
- **Liberty** - India also lacks in perception of personal liberties.
- e.g Supreme Court's order about National anthem in cinemas, the politicisation of universities or violence against creative expression like movies.
- **Mental Health** - Mental health care continues to be grossly underfunded.
- The government spends only 0.06% of its total health spending on mental care, while U.S. spends around 6%, UK 10% and Bangladesh 0.44 %.
- But at least 7% of Indians suffer from mental health problems.
- Also the psychiatrist to population ratio currently remains a grossly inadequate at 1/2-3 lakh people.

7.11 HUMAN DEVELOPMENT REPORT

Why in news?

2016 Human Development Report has been released by the UNDP.

What are the findings?

- The HDI is a measure for assessing **progress in three basic dimensions** of human development
 1. A long and healthy life
 2. Access to knowledge &
 3. Access to a decent standard of living.
- The world's top three countries in HDI are Norway, Australia and Switzerland.
- India slipped down one place to 131st place from 130 among the 188 countries ranked in terms of human development.
- India's HDI value is 0.624 and it is in the "medium human development" category, alongside countries such as Congo, Namibia and Pakistan.
- It is ranked **third among the SAARC countries**, behind Sri Lanka (73) and the Maldives (105).
- The largest gender disparity in development was in South Asia, where the female HDI value is 20% lower than the male value.
- 54% of people who live in multidimensional poverty are concentrated in South Asia.

- The percentage of women in the workforce is the lowest in India among the BRICS countries.
- India's public health expenditure (1.4% of GDP) was even lower than South Asian average spending (1.6% of GDP).

What were the positives mentioned?

- In India, between 1990 and 2015, life expectancy has improved by 10.4 years.
- Child malnutrition declined by 10% points from 2015.
- The report **praised India's reservation policy**, saying even though it has not remedied caste-based exclusions, it has had substantial positive effects.
- It also hailed the MGNREGA, Right to Information, National Food Security, and Right to Education Acts.
- It commended the Indian grassroots group **MazdoorKisan Shakti Sangathan** for popularising social audits of government schemes.

What needs to be done?

- A central focus on social indicators is necessary for India to break free from its position as an underachiever.
- More should be done to eliminate subsidies for the richest quintile.
- The rise in revenues should go towards making public education of high standards accessible to all and delivering on the promised higher budgetary outlay for health care.
- Access to justice gets insufficient attention in the measurement of development is **the state of democracy**.
- India should ratify UN conventions on torture, rights of migrant workers and their families, and protection against enforced disappearance.

7.12 NATIONAL FAMILY HEALTH SURVEY-4

Why in news?

National Family Health Survey-4 was conducted across 26 states and Union Territories.

What are the findings of the survey?

- This is **the first time** the government has conducted a survey to find out the incidence of diabetes and hypertension.
- More than 1/5th of India's population suffers from diabetes and hypertension.
- The overall incidence of **diabetes was 20.3 %** and that of **hypertension 22.2 %**.
- States with a higher incidence of hypertension include Punjab, Sikkim and Maharashtra.
- States with the incidence of diabetes to be higher than the national average include Goa, West Bengal, Assam and Odisha.
- The deliveries by caesarean section are disproportionately high in private hospitals as compared to government ones.
- It is above the WHO's expected rate in any population i.e 25 %.
- The percentage of caesarean sections is the highest in private hospitals of urban Tripura i.e 87.1 %.

- The sex ratio improved from **914 to 919** at the national level over the last decade, with the top three states being **Kerala (1,047)**, Meghalaya (1,009) and Chhattisgarh (977).
- In Haryana the sex ratio went down from 897 in NFHS-3 to 876.

7.13 INDIA US - IMPORT ALERT

Why in news?

The stock of Divi's Laboratories dropped over 20% following the announcement that one its facility has received an import alert from the US drug regulator U S Food and Drug Administration (FDA).

What is import alert?

- Companies that sell medicines in the US market are required to comply with the regulations mandated by the FDA.
- Manufacturing units that supply drugs to the US are inspected by the FDA periodically.
- If they find any lapses in the adherence to the mandated regulations, the same is notified by the FDA in Form 483 as observations.
- This is the first level of action by the FDA in case of deviation from the **good manufacturing practices (GMP)**.
- The company is given time to respond to the observations.
- If the reply is not convincing the FDA may issue a warning letter.
- This letter restricts the ability of that manufacturing unit to supply drugs to the US from that facility.
- Then the company has to appoint consultants to advice on corrective actions and its monitor implementation.
- After this, it approaches the FDA for re-inspection.
- If the FDA is not satisfied again, it issues an **import alert**.
- This implies a ban on the facility from supplying drugs to the US.
- However, there have been instances where the FDA has directly issued an import alert even without an initial warning letter.

Why is it important?

- The US is the largest pharmaceutical market in the world.
- The share of Indian pharma companies in the US market has risen significantly over the past few years, catering nearly 40% of its pharma drug requirement.
- Many patents are expected to expire in the upcoming years, opening a huge market for generic drugs from India.
- So to an investor in pharma stocks, it is important to keep a close tab on the regulatory action by the FDA as they can pose growth risks.
- The progression of observations into import alerts and warning letters has been increasing of late.
- So investors need to focus on the speed with which a company resolves these issues.

7.14 SEBI FINED RIL

Why in news?

SEBI's recent order imposed a heavy penalty on Reliance Industries (RIL) for its unfair trade practices.

Why RIL is fined?

- RIL and 12 other entities were allegedly involved in the short sale of Reliance Petroleum Ltd (RPL) shares ahead of the amalgamation in 2007.
- A short sale involves selling borrowed shares with plans to buy them back later at a lower price.
- RIL had made “unlawful gains” of Rs513 crore, which could have been made by “fraudulent and manipulative strategy”.
- In 2008, SEBI launched investigations into the matter and initiated quasi-judicial proceedings in 2010.
- SEBI completed investigation in 2015 and subsequently issued a showcause notice to RIL.

What is the current order of SEBI?

- It banned RIL from accessing the equity derivatives market for a year.
- It also directed the company to disgorge the profits made by violating the rules on unfair trade practices when it sold a stake in its erstwhile unit RPL.
- RIL has been asked to pay a penalty of around Rs1,300crore.
- The other 12 entities named in the order have also been barred from trading in the futures & options segment for one year.
- RIL has been asked to pay up within 45 days of the order.
- The common perception that Indian regulators readily prosecute small offenders for infractions, while leaves giant firms, has been proved wrong by the order.

7.15 FIGHT AGAINST SHELL COMPANIES

Why in news?

Investigative agencies have found that about ₹ 4,000 crore of cash was deposited in shell companies following the demonetisation.

What are Shell Companies?

- It is a non-trading company used as a vehicle for various financial manoeuvres.
- They are paper companies incorporated around the world without any tangible business.
- Often many such shells have a common registered address with ‘dummy’ directors who may be real persons but are untraceable or unrelated to the business.
- In Kolkata, Delhi and other cities, over 300 companies can be found registered at one single address, all for facilitating illicit transactions.
- Suspicious transactions are often below the threshold of automatic banking software triggers.
- In some cases, ‘seed’ money is introduced as capital in one shell which is then passed on to other shells in a single day in a single branch.

- Thus, each company gets identical sums as capital, which is instantly lent or invested in another company.
- The exercise is repeated five to ten times to create the illusion of real transactions and multiplying money.
- In cases involving forex, large remittances are sent out as payment for fictional imports, advances or commissions, later moved into other shells and then brought back as receipts (called **round-tripping**).
- In India, shell companies have traditionally been used for rotating and siphoning off funds through fictitious sales, inflated purchases, unjust commissions or for creating equity for individuals operating behind the scenes.

How prevalent are they?

- In May 2016, investigations revealed that 24 ghost companies operating from a single branch of a leading public sector bank in Delhi were used to cheat the Government and banks of several crore rupees.
- The leaked Panama Papers (2016) exposed a global network of shell companies operating from tax havens used for moving assets and cash from one country to another illegally.
- An OECD reportsaid that shell companies are increasingly being used for illicit purposes.
- The SIT on black money says such manipulation of stocks and creation of non-taxable capital are gaining popularity.
- SIT points out that investments from the Cayman Islands, a tax haven, to India amount to ₹ 85,000 crore, reflecting the role of shells operating from tax havens in **money-laundering**.

What should be done?

- Cash deposits should be limited to ₹ 3 lakh to make large deposits or layering of cash difficult, if not impossible.
- Real-time monitoring and detection of unusual transactions should be done.
- **MCA 21**, the portal in which all corporate filings reside, is a good starting point. It can be mined for common directors, common registered addresses, little business and suspicious transactions to create alerts.
- A central **KYC registry** of transactions will also be useful.
- Technology plays a significant part in surveillance and oversight.
- Robust business rules embedded in the artificial intelligence (AI) of machines will help both pre-emptive and preventive actions.
- Swift and exemplary punishment is equally essential.
- Apart from those directly involved, others in the chain of activities should also be held culpable.
- The current levels of conviction for white-collared crimes, estimated at 0.006 per cent by some experts, needs to improve significantly.
- A strong deterrent mechanism brought about by diligent investigations and quick judicial decisions will produce the desired result.

7.16 THE AILING TELECOM SECTOR

What is the issue?

- The telecom sector is facing challenges with lowering revenues due to free voice calls and the cheap data offered by Reliance Jio.
- This is complicated by the rigid regulations in the industry

What is the present scenario?

- The Industry has a debt burden of Rs 4 lakh crore.
- Banks are increasingly getting insecure about their exposure to telecom companies.
- Some foreign players have started to look for an exit from the sector. e.g Norway's Telenor group planning to exit by selling to Airtel.
- Consolidation has started happening as smaller players find the going tough. e.g Vodafone-Idea merger

What is the mandate of TRAI?

- Telecom Regulatory authority of India was established on 1997 by an Act of Parliament to regulate telecom services, including fixation/revision of tariffs for telecom services which were earlier vested in the Central Government.
- One of its main objectives is to provide a fair and transparent environment that promotes a level playing field and facilitates fair competition in the market.
- TRAI regularly issues orders and directions on various subjects such as tariffs, interconnections, quality of service, Direct to (DTH) services and mobile number portability.
- The TRAI Act was amended to establish a Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT) to take over the adjudicatory and disputes functions from TRAI.
- TDSAT was set up to adjudicate any dispute between a licensor and a licensee, between two or more service providers, between a service provider and a group of consumers, and to hear and dispose of appeals against any direction, decision or order of TRAI.

What are the suggestions made by TRAI?

- To restore the financial health of the sector, TRAI asks the government to relook at the various levies collected from the networks.
- The first is to make the spectrum user charge uniform at 3% (of adjusted gross revenue) and then gradually reduce it to one per cent.
- At the moment, the industry pays between 2% and 6%.
- The licence fee should be lowered from 8% to 6%.
- The contribution to the Universal Service Obligation Fund should be cut from 5% to 1%.
- The fund is known to have collected over Rs 35,000 crore so far, which the government wants to use for Bharat Net - plan to link all village panchayats through fibre optic.
- TRAI has also suggested that networks be allowed to pay for spectrum over 20 years instead of the current 10 years.

What will be the outcomes of above suggestions?

- There will be financial repercussions if the government agrees to these suggestions.
- But, in the long run, these will ensure that the telecom sector stays robust.
- The government's push for digitisation depends critically on a viable telecom infrastructure.
- As the usage of data picks up, the networks will need to spend more on spectrum and equipment, but if they run out of resources to do so, there will be pandemonium all over.

7.17 VODAFONE-IDEA MERGER

What is the issue?

Idea Cellular agreed to merge with the Indian unit of the U.K.-headquartered Vodafone making it a \$23 billion giant.

What will be the outcome?

- The Vodafone-Idea merger will create the country's largest network with 400 million subscribers and 41 per cent share of industry revenue, ahead of BhartiAirtel and Reliance Jio.
- The combine will have a stronger balance sheet and will be able to cut down on expenditures.
- The move has stoked rumours that the current tariff war, initiated by the MukeshAmbani-led Reliance Jio's entry into the high-speed data market in 2016, will possibly come to an end in the near future.

What are the causes?

- Due to the **poor financial health of the sector**, we are witnessing mergers, acquisitions and combinations of companies like Idea and Vodafone, Aircel and R Comm and MTS.
- Other companies such as Videocon and Etisalat have already left the industry because of this hyper-competitive pressure.
- Vodafone and Idea Cellular have decided to merge in order to survive in an industry that is seeing its fortunes dip with each passing quarter.
- **The high debt burden caused by steep spectrum prices and the tariff war unleashed by Reliance Jio** have left the industry gasping for breath.
- The numbers are startling: Of the five listed networks, four (except BhartiAirtel) reported losses in April-December 2016.

What the TRAI suggested?

- The Telecom Regulatory Authority of India (Trai) has from time to time made a case for **reducing the various levies imposed by the government on the networks**.
- It has suggested that the spectrum user charge be reduced from an average of 6 per cent of adjusted gross revenue to 3 per cent and then 1 per cent; the licence fee be lowered from 8 per cent to 6 per cent; and the contribution to the Universal Services Obligation Fund be reduced from 5 per cent to 1 per cent.
- It has also suggested that networks be allowed to pay for spectrum over 20 years instead of the current 10 years.

7.18 UDAN TAKES OFF

Why in news?

UDAN, the regional connectivity scheme has been rolled out recently.

What is UDAN scheme?

- Ude Deshka Aam Naagrik (UDAN) is a scheme to develop the regional aviation market.
- It will create **affordable yet economically viable and profitable flights** on regional routes so that flying becomes affordable to the common man.
- It envisages providing connectivity to un-served and under-served airports of the country through revival of existing air-strips and airports.
- It would be in operation for a period of 10 years.
- It provides for various benefits including no airport charges and three-year exclusivity on the routes.
- The selection of airports where UDAN would start would be done in consultation with State Government and after confirmation of their concessions.

What is the current development?

- Five airlines will operate on 128 routes connecting over 30 unserved airports.
- The routes will connect 70 airports, including 31 unserved and 12 under-served ones under UDAN scheme.
- On each flight, **50% of the seats are capped at Rs 2,500 per seat** for one-hour travel.
- These flights would connect airports spread across over 20 states and union territories.
- The first flight under UDAN is expected to start next month.

What about Viability Gap Funding?

- It is a **grant given to support projects** that are economically justified but not financially viable.
- For UDAN, the money for VGF is partly raised through a levy of up to Rs 8,500 on flights operating in major routes like Delhi and Mumbai.
- It would be in place for three years for the airlines concerned from the date of starting operations in a particular UDAN route.

Why we need UDAN?

- It will connect 70 airports including 31 unserved ones like Shimla, Bathinda and Jaisalmer, and 12 underserved airports like Kullu.
- Bringing Tier 2 and Tier 3 into the country's aviation network is a significant development in a country where 80% of air travel is between the metros.
- The scheme will foster regional connectivity, make businesses and trade more efficient, enable medical services and promote tourism.

What are some of the challenges?

- There are fears that a **flight from an UDAN location will be low priority** for air traffic controllers in big cities.
- Airports in many Tier 2 and Tier 3 cities **do not have big runways**, so they can't take regular aircraft.
- Short takeoffs and landings need specialised crew.
- But India produces only around 200 to 300 pilots every year.

7.19 IMPORT REGULATIONS

Why in news?

In a bid to streamline the process of clearance for imported foods, the Food Safety and Standards Authority of India (FSSAI) has notified import regulations.

What are the key highlights of the regulations?

- The regulations include provisions for risk-based framework under which the food regulator may adopt a **risk-based inspection process and** review risks associated with articles of food imports from time to time.
- The comprehensive regulations would facilitate ease of trade and ease of doing business while ensuring that the health of the consumers is not compromised.
- It has laid down procedure for clearance of imported food products into India.
- It has various provisions related to licensing regime for food importers.
- It also includes provisions for food import clearance for specific purposes, storage, inspection and sampling of imported food articles and prohibition and restriction on food imports, besides labelling provisions for import of food products.
- The regulation specifies the scheme for risk-based sampling imported food articles, which facilitates ease of doing business while not compromising the health of the public.

What is the way ahead?

- The food authority should also introduce a pre-arrival document review for regulating imports.
- The regulator should also enter into memoranda of understanding with relevant agencies in exporting countries for accelerated clearance of food imports from the countries to facilitate ease of doing business.
- It should issue food alert notifications, including time-bound prohibition on articles of food or prohibiting source or recalls, based on the risk associated with the articles of food.

8. AGRICULTURE

8.1 KERALA - PADDY SHORTAGE

Why in news?

The Chief Minister was in the national capital in January seeking a greater allocation of rice to the State.

What is the reason for poor paddy cultivation in Kerala?

- It is a reflection of the failure of public policy.

- **Labor cost** - Initially men from agriculture sector migrated to gulf region in search of better opportunities.
- As the higher incomes transformed the households socially, the women too withdrew from agriculture.
- This hit paddy cultivation most because mostly women were traditionally in the planting and harvesting of paddy in the state.
- The sector began to face severe labour shortage.
- As a result the wage rose.
- This made the cultivation of paddy no longer viable, as cheaper rice came in from the rest of India.
- **Land Ownership** - In abolishing tenancy the land reforms had extinguished the traditional landlords.
- But it did not inevitably transfer land to those who actually laboured on the field.
- Many agricultural labourers would have not migrated if they also owned the land.
- **Leasing** - Kerala is rare among the world's economies where agricultural production actually declined after land reforms.
- In theory this can be rectified, if those with the ownership of land but not wishing to cultivate leased it out.
- But leasing was made unlawful by the land reform Act.
- At the time of its legislation, tenants were vulnerable of eviction at will.
- Therefore this archaic law currently holds more of a symbolic value.
- The law discourages tenancy as unlawful but is positive about the alienation of agricultural land to other purposes.
- **Environment** - The present natural environment in Kerala is less hospitable to agriculture of any kind, let alone paddy cultivation.
- This is due to the depletion of groundwater and sand mining of the riverbeds. There has also been the alienation of agricultural land.

What should be done?

- Kerala needs a land use policy that conserves every bit of its natural capital.
- The State could consider acquiring all unused paddy land and making it available to the Adivasis on long-term lease.
- It also should make amendment in its laws to enable leasing and consolidation of lands.
- Public policy is likely to adapt only if political parties are pressurised by a citizenry.
- Therefore citizen should also work towards improving the paddy cultivation by saving diversion of agricultural land to other purpose and the regeneration of degraded lands.

8.2 SAVING THE PULSES SECTOR

What is the issue?

The prices of pulses are volatile inspite of a good harvest in 2016-17 season.

What was the problem?

- In 2015-16, the production of all pulses had come down to 16.5 million metric tonnes (MMT), and imports increased to 5.8 MMT.
- The rising demand for imports from India also put international prices under pressure.
- This has caused hardships to poor consumers at home as dal is their survival food.
- Hence policy level concerns were raised to find ways to augment pulses supplies.
- The previous policies have failed to achieve self-sufficiency in pulses.
- So a committee under the chief economic advisor was formed to solve this problem.

What are the findings of the committee?

- **Low MSP** - The committee found that the farmers have to be incentivised to grow more pulses they must receive a sufficient profit.
- The current MSP is around Rs.4500/quintal.
- So the committee recommended Rs 7,000/quintal to compete with other crops.
- However only Rs 5,000/quintal was offered in the current announcement 2016-17.
- **Price Instability** - In spite of low MSP farmers planted more area under pulses due to high market prices and a good rainfall.
- So the production increased by 33%.
- But this subsequently resulted in a massive drop in the market price of dal to level that is even below the MSP.
- Even the measure like banning private trade & exports and increasing the government procurement could not enough to hold the price at the MSP.
- Such low prices do not give much profit to pulses producers.
- So they wont increase the amount of irrigated area under pulses. This will hamper the mission of self sufficiency of pulses.

What should be done?

- **Storage** - Stocking limits on private trade should be removed for atleast next three years so that private players are encouraged to buy and build ample storage capacity. Storage capacity is essential for maintaining the stability of prices.
- **Exports** - Restrictions on exports of all pulses should be removed so that farmers are allowed to gain from exports in case of low domestic prices.
- **Futures** - All pulses should be introduced in futures trading so that farmers can take planting decisions based on likely future prices, not based on past market prices.
- **Government procurement** at MSP should be increased to maintain buffer stock to reduce price volatility.
- **Duty** - Import duty should be increased to 5-10% for a short time to check the domestic price from falling.

8.3 DARJEELING TEA CRISIS

What is the issue?

The Darjeeling tea faces an uncertain future as the 87 gardens in the hills of northern West Bengal are caught up in a vicious cyclic problem.

What is the problem?

- The key problem is the very nature of the tea bushes it uses.
- Around 90% of the bushes in the area uses the 'camellia sinensis'/'**Chinary plant** variety of bushes which were imported from China 150-100 years back by the then British owners.
- Compared to this, tea gardens in rest of India use the 'camellia assamica' plant variety which is native to Assam.
- This variant is losing its original taste and aroma.
- There is also a decline in production.
- The produce has fallen over the years from former 10 million kg (mkg) to just 7-8 mkg presently.
- There may be further decline as the plants ages.
- The Tea Board of India has shared its concern over replantation in the Darjeeling gardens.

What does the TRA suggests?

- As per industry executives, these bushes need to be replaced by the same bush variants which will call for Chinese import again.
- However it is illegal to import live tea plants to India.
- The Tea Research Association (TRA) has come up with indigenous clonal varieties of the Chinary which is used in some gardens.
- In case the very Darjeeling taste undergoes a change, the premium Indian produce may find it hard to hold its premium positioning in the international market.

What are the problems in it?

- Unlike the Assam or Nilgiri tea variants which are auctioned, the Darjeeling tea is primarily sold in private sales.
- Under this process, the final price is worked out based on taste samples.
- Industry officials fear that in case of change in the taste of the tea in the new variety, there may be a dramatic change in the price of the tea.
- Faced with **uncertain rains and irrigational issues**, the Darjeeling gardens have just four months to undertake a replantation exercise.
- It also coincides with the prime first and second flush during which these gardens earn their maximum revenue.
- No planter wishes to sacrifice this premium plucking season to replantation.
- The gestation period of the Chinary bushes is between 12-16 years, which puts the replanted crop area financially unviable during the timeframe.

8.4 SOIL HEALTH CRISIS

What is the issue?

- Indian farmers apply around 66 million tonnes of fertilizers every year.
- They account for a significant share of India's imports and subsidies.
- It also rapidly declines the soil health.

What is a Soil Health Card?

- The government has launched a nation-wide Soil Health Card (SHC) scheme in early 2015 to rejuvenate India's exhausted soil.
- It uses a grid-wise approach, to test the nutrient contents of representative soil samples from the fields.
- Accordingly, macro and micro nutrients needed by the soil are identified.
- Using this the specific, measured quantities of fertilizers is calculated and this information is printed on the SHC and made available to the farmers in that grid through the state agricultural departments.
- But farmers still buy large amount of fertilizer, disregarding SHC recommendations.

Why farmers disregard SHCs?

- Maximising yield and fear of loss are the major concerns.
- Farmers are convinced that there is a perfect correlation between high fertiliser usage and more output.
- They also believe that their farmlands have good soil health if they yield the desired output.
- So they are not sure that the advice based on the SHC can be relied upon, because of this perception.
- They are not easy to use.
- They give general recommendations regarding the quantity of fertilizers required over the entire crop season.
- In reality, fertilisers should be used in varying amounts over the different stages of the crop growth.

What should be done?

- The farmers need SHC recommendations tailored according to crop growth stages.
- Vigorous campaign must be done to disregard the more fertilizers-better yields myth.
- A behavioural approach based on understanding farmers' realities needs to be used.
- Soil health must be positioned as crucial to the long-term productivity of land, which will be irredeemably lost if the focus is only on present income flows.

8.5 STATE/UT AGRICULTURAL PRODUCE MARKETING BILL

Why in news?

The draft of the new model agricultural marketing law is floated by the government to invite public comments.

What is APMC act and why it is bad?

- The Agricultural Produce Market Committee is a marketing board established by state governments of India, one main function of which is basically to provide a platform for farmers to sell their produce.

- The APMC **forces the farmers to sell their produce only to middlemen** approved by the government in authorized Mandis.
- Thus, a vegetable producer cannot directly sell to a supermarket, they have to go through a broker. This increases prices for the end buyer and unnecessarily adds redtape.
- In a lot of cases, even after receiving the produce, some traders delay payment to farmers for weeks or months.
- If payment is made at the time of sale, then the trader may arbitrarily deduct some amount.
- To avoid tax, some traders do not give sale slips to farmers. As a result, it is difficult for the farmer to prove his income to get loans from banks.
- On average, the farmer is able to receive barely 25% to 33% of the final retail price. Middlemen receive double commission (both from seller and buyer), thus making consumers pay for this spread.
- The prime reason for the tardy progress on this front is the states' **reluctance to cede their hegemony** over farm markets.

How the new Bill is different?

- The new Bill is called State/UT Agricultural Produce Marketing (Development and Regulation) Bill.
- It moots setting up of private and **commodity-specific market yards** to end the monopoly of the APMCs and offer them the much-needed competition.
- Besides, it stipulates a **single licence for trading** within the state and at the national level and a single point levy of all market fees within the laid-down caps.
- It also seeks to promote **direct interaction between farmers and end-users of farm commodities**, including retail chains, exporters and agro-processing industries.
- The mandis are proposed to be encouraged to put up **electronic trading platforms** to make transactions, especially price determination, totally transparent.
- Thus, the new deed amalgamates the good features of both the model APMC Bill of 2003 and the electronic national agricultural market (**e-NAM**) launched last year.
- It also seeks to **depoliticise and democratise market committees** and state marketing boards by including farmers' representatives in their managing bodies and barring individuals from contesting for more than one post simultaneously.
- However, under the present rural socio-political setup, **it is hard to distance politicians** from farm-related bodies.

What is the way forward?

- There need to be at least 1 market in 80 sq.km (presently, it is 1 in 487 sq.km). Thus, the private sector alone cannot be expected to bridge this huge gap.
- The states will have to continue to play a meaningful role in both expansion and modernisation of the farm marketing network.
- Since the success of the fresh move will **depend largely on the states' cooperation**, the Centre will need devise ways and means to motivate them to actually carry out the suggested changes.
- Because, at stake are the interests of farmers as well as consumers, both of whom are short-changed by the present inefficient, cost-intensive and non-transparent farm marketing system.

9. SCIENCE AND TECHNOLOGY

9.1 PLANETARY WAVES IN SUN

Why in news?

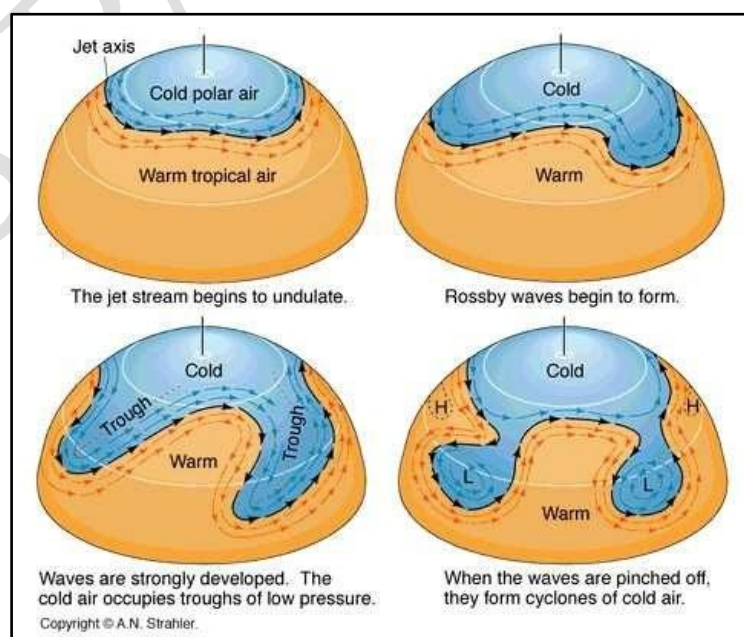
Scientists recently discovered that large scale planetary waves that meander through the atmosphere high above Earth's surface have been also found to exist on the Sun.

What are planetary waves?

- Planetary waves, also known as Rossby waves, are a natural phenomenon in the atmosphere and oceans that largely owe their properties to rotation of the earth.
- These waves are giant meanders in high-altitude winds that have a major influence on weather.
- They are associated with the path of the jet stream and the formation of low- and high-pressure systems, which in turn influence local weather events.
- The waves form in rotating fluids - in the atmosphere and in the oceans.

How was it discovered?

- Since the Sun is also rotating, and because it is made largely of plasma that acts like a vast magnetised ocean.
- Yet this has been discovered only recently because unlike Earth, that can be scrutinised at numerous angles by satellites in space, the Sun could be studied from only one viewpoint i.e earth.
- But from 2011 to 2014, scientists had the unprecedented opportunity to see the Sun's entire atmosphere from NASA's Solar Dynamics Observatory (SDO), which is placed between the Sun and the Earth.
- It was supplemented by measurements from NASA's Solar TERrestrial RELations Observatory (STEREO) mission, which included two spacecraft orbiting the Sun.
- These three observatories provided a 360-degree view of the Sun which helped to understand large-scale wave patterns.



What is the significance of recent discovery?

- Similarly to the Rossby waves, the waves discovered on the Sun may be intimately tied to solar activity, including the formation of sunspots, their lifetimes, and the origin of the Sun's 11-year solar cycle
- It could also link a range of solar phenomena that are also related to the Sun's magnetic field, including the formation of sunspots, active regions, and the eruption of solar flares.
- It enhances the prediction of space weather much further in advance.
- It can also help to understand the interior of the sun and where the magnetic field of the Sun comes from.

9.2 FINDING CHANDRAYAAN-1

Why in news?

NASA scientists have found Chandrayaan-1 spacecraft, which was considered lost, by using a new ground-based radar technique.

What is Chandrayaan-1?

- Chandrayaan-1 is the India's first lunar probe.
- It was it was launched in October, 2008.
- Indian Space Research Organisation (ISRO) lost communication with Chandrayaan-1 in August 2009.
- The spacecraft is very small cube about 1.5 meters on each side i.e about half the size of a smart car.
- The interplanetary radar has been used to observe small asteroids several million miles from Earth.
- But researchers were not certain that an object of this smaller size as far away as the Moon could be detected even with the world's most powerful radars.

What NASA did?

- Scientists at NASA's **Jet Propulsion Laboratory (JPL)** have successfully located ISRO's Chandrayaan-1.
- It was found circling some 200 km above the lunar surface.
- They used ground-based radar technology, i.e., sending microwave beams and listening to echoes, to track the lost device orbiting the moon.
- The team used NASA's 70-metre antenna at NASA's Goldstone Deep Space Communications Complex in California to send out a powerful beam of microwaves directed towards the Moon.
- Then the radar echoes that bounced back from lunar orbit were received by the 100-meter Green Bank Telescope in West Virginia.
- Not only could they find the spacecraft, they could also determine its speed and orbit.
- Nasa has already been using this technology to communicate with **Voyager-I spacecraft**, which has reached the edge of the solar system.

What is the way ahead?

- With companies and countries sending more space missions and satellites into orbits, **the technique can help in providing interplanetary radar investigations** to ensure that objects don't collide in space.
- Though limited to moon so far, it can perhaps be used in the case of other planets too.
- Using ground radars with the ability to track lunar orbits, space travel can become a lot safer.

9.3 ENVIRONMENTAL CLEARANCE FOR INO

What is the issue?

- Recently, the NGT has **suspended the environmental clearance** given to the India-based Neutrino Observatory (INO) which was to come up in the West Bodi Hills in Theni district in Tamil Nadu.
- Ever since the INO got approval from the Ministry of Science and Technology, **it has been drawing flak from activists** despite repeated assurances from scientists that it is unlikely to harm the environment or affect the livelihoods of the people.

What could happen now?

- The order of the NGT has forced the INO to seek fresh environmental clearance, and approval of the National Board for Wildlife.
- It is a process that could take upto 2 years, adding further to the delay that the project already faces.
- In the worst case scenario, the INO might even be forced to look for an alternative site, something that it has already had to do once earlier because of similar environmental concerns.

What is the reason behind opposition?

- The latest problem has been triggered by the NGT's assessment that the **INO site lies at a distance of 4.9 km from a national park in Kerala's Idduki district**, at least 100 m inside the 5 km radius beyond which projects do not need National Board for Wildlife approval.
- While environmental issues do exist, at the heart of these objections is also **fear and mistrust of science and scientists**.
- Doubts range from questions of safety to the questionable potential for application of neutrino physics.
- Are neutrinos likely to harm people when they strike them? Will the tunnels made for the observatory be used to store nuclear waste? Are some of the questions that people need answers.

What are the responses from scientific community?

- These and other questions have been addressed and answered in the negative by scientists.
- **On neutrino** - Neutrinos from the sun are falling on us by the trillions every second.
- **On nuclear waste** - Storing radiating material will spoil all the chances of detecting neutrinos, which interact rarely.
- **On usefulness** - We cannot say at the point of invention how useful a discovery will be. Yet, we can certainly imagine and speculate how useful the science may be.
- Former President APJ Abdul Kalam said about how neutrinos could be used to recognize the signs of nuclear proliferation from a remote location.
- He also guessed how neutrinos could help in the search of dark matter and dark energy.
- Additionally, just like we have optical and radio astronomy, we can literally widen our horizons with **neutrino astronomy**.

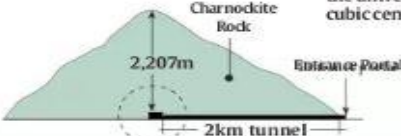
What is the INO project?

- The neutrino observatory is the most ambitious scientific research facility that India is trying to build.

- To be located **1.5 km below the Earth's surface**, this observatory would be used to detect and study neutrinos, one of the fundamental particles of the universe.
- Several groups in different countries are carrying out parallel research on neutrinos, which are believed to hold very important clues to some of the basic questions on the universe.
- In recent years, **neutrino research has led to the Nobel Prize** in Physics in 2002 and 2015.
- Detected for the first time in 1959, though their existence was predicted almost three decades earlier, in 1931, neutrinos were later found to be **omnipresent**.
- They are the **second most abundant particles in the world**, after photons.
- These high-energy particles are **produced in natural radioactive decays** and all sorts of nuclear reactions happening in nuclear power reactors, particle accelerators or nuclear bombs.
- But the most **common source** of neutrinos are celestial phenomena i.e., the birth and death of stars, collisions and explosions happening in space.
- The core of the Sun is an important source of neutrinos.
- A large number of the neutrinos were produced at the time of the Big Bang, making them good candidates to extract more **information from about the origins of the universe**.
- But because they are **electrically neutral and almost massless**, these neutrinos have an extremely low tendency to interact with other objects.
- This is the reason why scientists have to go deep underground to set up special detectors in a bid to catch the faint signals of neutrinos in an environment that is relatively free from 'noise' and disturbance.

NEUTRINOS

ARE THE second most abundant subatomic particles after photons, and one of the several fundamental particles the universe is built of. They have no charge, but are thought to have a small, as-yet-undetermined, mass. They are everywhere, but are extremely difficult to detect because they interact poorly with other objects, passing through the human body without a trace.

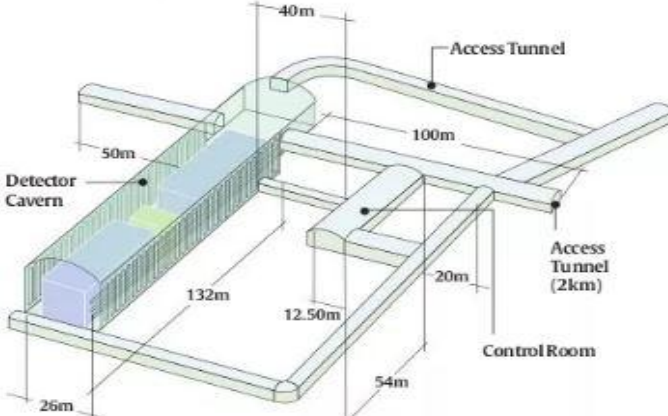


INO PROJECT

WILL PLACE a specially-built iron calorimeter (ICAL) detector about 1.5 km under the ground, where the chances of detecting neutrinos are higher. The project will aim to determine the mass of neutrinos, and to establish a "mass order" among the three known types of neutrinos – electron, muon and tau.

KEY FACTS

<p>NEUTRINOS are thought to have been produced just after the Big Bang that created the universe. The neutrino density of the universe is 330 per cubic centimetre.</p>	<p>100 TRILLION neutrinos are believed to pass through the human body every second.</p>	<p>50,000 TONNES of magnets will make up the iron calorimeter detector.</p>
<p>RS 1,500 CR is the estimated cost of the project. Building the lab is likely to cost Rs 470 cr.</p>	<p>23 INSTITUTIONS are part of the project, involving over 100 engineers and physicists.</p>	



PROJECTS ELSEWHERE

CHINA: Jiangmen Underground Neutrino Observatory in Kaiping, Jiangmen, aims to determine mass hierarchy of the three types of neutrinos and their oscillation properties, using a 20,000-tonne liquid scintillator detector.

JAPAN: Hyper-Kamiokande detector at the Kamioka Observatory in Hida aims to determine mass hierarchy and study cosmic neutrinos, using 2 cylindrical tanks filled with 1 million metric tonnes of ultrapure water as detector.

EUROPE: The Large Apparatus studying Grand Unification and Neutrino Astrophysics, or LAGUNA, is a European project aimed at building a next-generation neutrino observatory.

9.4 ADDRESSING SUPERBUG

What is the issue?

- A US woman died due to such a superbug which heightened the global disquiet over the growing menace of antibiotics resistance.
- Following this, WHO recently came out with its maiden list of antibiotic-resistant “priority pathogens”.

What are superbugs?

- Antimicrobial resistance (AMR) is the ability of a microbe to resist the effects of medication previously used to treat them.
- A superbug is a strain of bacteria that has developed extreme AMR i.e become resistant to all available antibiotic drugs.

What is the condition in India?

- The superbug was first detected in 2008 in a Swedish patient of Indian origin who had travelled to this country for medical care.
- This bug was subsequently named after the Indian capital as **New Delhi Metallo-beta-lactamase-1 (NDM-1)**.
- In India, the abuse of antibiotics is most rampant.
- Therefore it is a fertile ground for the growth of drug-tolerant bacteria.
- Even the intensive care units and operation theatres of reputed hospitals and government healthcare facilities have been infested with it.

What are the causes?

- Patients generally tend to self-medicate with antibiotics even for ailments that do not require these medicines.
- Doctors are prone to prescribing relatively more potent antibiotics meant for use as the last resort, for minor illnesses.
- Chemists disregard all norms for dispensing antibiotics. They not only sell them without doctors’ prescriptions but also assume the role of healthcare workers themselves to give these drugs to unwary customers.
- The health authorities and drug regulators are also found inadequate in preventing microbial immunity from growing to risky scale. They have been too careless to regulate the manufacture, trade and use of antibiotics.

What are the findings in the report?

- The WHO has dubbed superbug as one of the biggest threats to global health.
- It maintains that the misuse of antibiotics in humans and farm animals is accelerating the process of resistance development.
- India has most of the 12 families of bacteria that was catalogued in the WHO list.
- Most other countries are also witnessing an alarming uptrend in microbial resistance to antibiotics.

What are the new challenges faced by the world?

- The world is heading towards a post-antibiotics era when even common infections and minor injuries might prove fatal.

- There is also no reliable alternative at hand to antibiotics.
- All the researches to combat superbugs, but the work is still in a preliminary stage.
- Besides, there is no guarantee that bacteria will not mutate to develop immunity against the new drug as well.

What should be done?

- A fairly good policy to tackle antibiotics resistance was formulated in 2011.
- However, its implementation has been delayed.
- Therefore the **ban on over-the-counter sale of antibiotics** has remained only on paper.
- Therefore it is imperative to enforce antibiotics-dispensing norms effectively.
- It is also to promote steps for the prevention of common diseases through better hygiene and improve the coverage of vaccination to obviate the need for using antibiotics.

9.5 SELF-DRIVING CARS

Why in news?

Recent crash involving an Uber driverless car in Arizona has ignited the debate on driverless car.

What does self-driving car means?

- Self-driving or driverless or robotic cars use artificial intelligence and computing power to navigate from point A to point B, sensing their environment and making decisions in real time to avert mishaps.
- They do this using a range of sensors and cameras on all sides, as well as predetermined digital maps and real time inputs about traffic and obstacles.
- The first experimental self-driving cars started in 1984, but commercial trials are just a few years old.
- The US is the hotbed of this technology, with at least 27 companies including Tesla, Google and Volkswagen seeking permissions for tests in California alone.

Why do we need driverless cars?

- In theory, it is great economics.
- The 120 crore cars in the world sit idle for almost 95% of the time, making them perhaps the most inefficient human creation ever.
- Uber thinks that if all cars were autonomous and shared to scale, they could eliminate 90% of these vehicles.
- For residents of cities from Los Angeles to New Delhi, traumatised by traffic jams, this is an attractive idea.
- Fewer cars also mean reduced need for parking spaces and a drastic reduction in pollution.
- Plus, it is possible that self-driving cars would eliminate the human errors that kill thousands on the roads every year.
- From Google to Uber to Nissan, dozens of companies are working on the concept of self-driving cars with varying degrees of autonomy.
- All have different end goals — from reducing the number of cars on the road to making cars more efficient and safe.

Are there any laws to regulate these cars?

- None exists in reality.
- Recently, California became one of the first US states to draft a set of broad rules for the “autonomous test vehicles” on its roads.
- Among other requirements, the company running a test vehicle must put a driver behind the wheel as a failsafe.
- The draft also made it mandatory to make it known to everyone on the road that the vehicle is an autonomous one.

What are the obstacles for this technology?

- Google’s self-driving car has been caught in multiple collisions.
- And recent Uber self-driving car crash despite the fault was on other car.
- The technology is clearly nascent, and subject to other factors such as errors made by humans in other cars.
- INDIA, with its chaotic driving environment, presents a slew of challenges for this new revolutionary technological concept

9.6 BATTLING LEPTOSPIROSIS

Why in news?

The researchers at the Yale School of Public Health (YSPH) are involved in a major genome-sequencing effort for 20 *Leptospira* species.

What is Leptospirosis?

- It is a zoonotic disease i.e spread from animals to humans, caused by bacteria of the genus *Leptospira*.
- It is commonly known as rat fever and it affects both humans as well as other animals.
- The infection is generally transmitted to humans by water that has been contaminated **by animal urine** which comes in contact with unhealed breaks in the skin, the eyes, or with the mucous membranes.
- *Leptospira interrogans* spreads under conditions of stagnant water, flood water, humidity, and proximity between man and beast.
- In most of the cases, leptospirosis only causes mild flu-like symptoms, such as headache, chills and muscle pain.
- However, in some cases the infection is more severe and can cause life-threatening problems, including organ failure and internal bleeding.
- Severe form of leptospirosis is known as **Weil's disease**.

What is a genome?

- A genome is an organism’s complete set of DNA, including all of its genes.
- It includes the genes (the coding regions), the noncoding DNA and the genetic material of the mitochondria and chloroplasts.
- Each genome contains all of the information needed to build and maintain that organism.

What is the recent study about?

- In 2016 leptospirosis cases were reported in India, even before the onset of the monsoon.
- 2017 is facing the prospect of erratic monsoons.
- Also there is no major improvement nationwide in waste-water and flood-water management.
- So the leptospirosis toll is expected to be greater.
- Therefore the study is aimed to improve the odds of controlling this disease by understanding the genetic determinants of *Leptospira* pathogenesis.

What are the findings?

- One accomplishment is the development of a pangenomic signalling database.
- This has enabled researchers to explore the molecular mechanisms and regulatory pathways underlying *Leptospira* virulence.
- The research also focuses on a “One Health” approach.
- This approach integrates efforts to predict and control a disease at the human-animal-ecosystem interface, which is the key to defeat re-emerging zoonotic diseases such as **leptospirosis**.
- It stresses upon identifying transmission sources, stratify disease risk and prioritise prevention in the resource-poor settings of Indian slums
- It also highlights the fact that across Primary Health Centres in India, rapid diagnostic tests are often used instead of serological tests due to lack of adequate trained personnel.
- These rapid tests may not reach the optimal sensitivity until at least a week after onset of fever.
- The sensitivity of the tests is low during the acute stage.
- Therefore these rapid diagnostic tests should be used with caution before ruling out leptospirosis.

10. ENVIRONMENT

10.1 SKIPPING BS III

Why in news?

The Supreme Court in its recent judgement ordered a freeze on the registration and sale of BS-III fuel compliant vehicles by any manufacturer or dealer on and from April 1.

What are Bharat stage (BS) norms?

- Bharat stage emission standards' are emission standards instituted by the GOI to regulate the output of air pollutants from internal combustion engine equipment, including motor vehicles.
- The standards, based on European regulations were first introduced in 2000.
- The standards and the timeline for implementation are set by the Central Pollution Control Board under the Ministry of Environment & Forests and climate change.
- It is the work of minister of petroleum and natural gas to make the fuel compatible for various Bharat stages.
- The higher the number gets, the stricter the Bharat Stage emission norms get.
- All new vehicles manufactured after the implementation of the norms have to be compliant with the regulations.

What is the present scenario of BS?

- Since October 2010, Bharat Stage (BS) III norms have been enforced across the country.
- In 13 major cities, Bharat Stage IV emission norms have been in place since April 2010.
- In 2016, the Indian government announced that the country would skip the BS-V norms altogether and adopt BS-VI norms by 2020.
- The phasing out of 2-stroke engine for two wheelers, the cessation of production of Maruti 800 & introduction of electronic controls have been due to the regulations related to vehicular emissions.
- The apex court in its recent judgement said that the right to health is more important than the commercial interests of a few auto companies.
- Last year it cracked down on diesel vehicles in the national capital region, disallowing registration of cars of over 2000-cc engine capacity.

What are the problems in the implementation?

- It takes years for automakers to develop a new kind of an engine.
- Even after the research and development is over, the task of setting up full scale production is much bigger.
- All of this comes at a cost which eventually makes the vehicle more expensive for the end customer of the product.
- This can be a cause of concern for automakers given the price sensitivity of the Indian market.
- There is a huge stock of vehicles left to be sold into the market that are BS-III compliant and the latest SC decision might make them redundant.
- The companies are holding stock of around 8.24 lakh such vehicles.
- But SC said manufacturers were then allowed to sell their inventory after the deadline.
- There is also the requirement of cleaner fuel to run these vehicles that comply with a stricter emission regulation.
- It is not feasible to make internal combustion engines pollute less while using poor quality of fuel.
- This will require a huge amount of investments to make the oil refineries capable of producing a better quality of fuel to make that fuel available across the country.
- The Centre has spent around Rs 18,000 to 20,000 crore for producing cleaner fuel.
- But it is also to be noted that the increase in private cost is offset by savings in health costs for the public, as there would be lesser amount of disease by air pollution.

What was the industries' demand?

- The industries had been asking for an extension of the deadline.
- It said that the entire industry was stuck with more than 800,000 vehicles, mostly two-wheelers and three-wheelers.
- But the SC rejected the plea stating that the health of the people is more important than the commercial interests of the manufacturers.

Why extension should not be allowed?

- **Established guidelines** - The road map for the upgrade from BS-III to BS-IV was clearly laid out.
- For new models, the new norms were supposed to come into effect from April 1, 2016.
- For the existing models, the industry was given 12 months to transit to BS-IV norms.
- This was done because companies needed to make investments in plant and machinery.
- The Environment Pollution (Prevention and Control) Authority (EPCA) had been working with the manufacturers since October last year to help manage the transition.
- Yet, close to the deadline, the industry was seeking an extension, claiming huge inventory.
- **Precedence** - If allowed, it would have undermined policy credibility and adherence.
- Such a transition is neither the first one nor the last.
- An extension now would lay down a wrong precedent for the future when India intends to adopt BS-V and BS-VI norms.
- Also the transition to BS-IV is not a new development.
- 13 Metro cities adopted this norm way back in April 2010.
- **Discriminatory** - The extension would penalise those manufacturers that followed the rules.
- e.g Bajaj Auto had upgraded its factories to produce BS-IV vehicles. It argued that companies such as itself were being priced out of the market because of the extra cost, and price, of such enhancement.
- Manufacturers are unwilling to make investments in safety and environment protection, claiming that India is a highly price-sensitive market and any such upgrade bumps up the price.
- But this can hardly be an excuse to compromise on safety and emissions although it reflects poorly on Indian consumers' priorities as well.
- The Supreme Court judgment should make automobile manufacturers wary of asking for an extension when the emission norms are upgraded next.

10.2 WESTERN GHATS NOTIFIED AS ECOLOGICALLY SENSITIVE AREA

Why in news?

The government has notified 56,825 square km area in the Western Ghats (WG) region as ecologically sensitive area (ESA).

What does the notification mean?

- The notified land is spread over six states of Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu.
- In the ESA, all kinds of mining activities, thermal power plants and highly polluting industries would no longer be allowed.
- The existing mines shall be phased out within five years from the issue of final notification or on the expiry of the existing mining lease, whichever is earlier.
- All new '**Red**' category industries and the expansion of such existing industries shall be banned.

- Other kinds of projects and activities, like operation of hydropower plants, and **‘orange’ category of industries**, will be strictly regulated in the ESA.
- New expansion projects of building and construction with built-up area of 20,000 square meters and above shall be prohibited too.

Why Western Ghats is so important?

- It is a UNESCO World Heritage Site.
- It is one of the eight **"hottest hot-spots"** of biological diversity in the world.
- It has over 7,402 species of flowering plants, 1,814 species of non-flowering plants, 139 mammal species, 508 bird species, 179 amphibian species, 6,000 insects species and 290 freshwater fish species.
- Thus, the demarcation of an ESA is an **effort to protect the fragile eco-system** from indiscriminate industrialisation, mining and unregulated development.
- Two committees – Gadgil and Kasturirangan – were appointed in the last eight years to identify the areas that needed to be kept out from such activities.

Gadgil committee	Kasturirangan committee
It designated the entire Western Ghats as an ESA	The report distinguishes between cultural and natural landscape.
It classified Western Ghats into Ecologically Sensitive Zones (ESZ) 1, 2 and 3.	Cultural landscapes include human settlements, agri fields and plantations and covers 58.44% of the Western Ghats. 90% of the remaining natural landscape is marked as an ESA.
It called for complete ban on high capacity storage dam and sand mining in ESA 1.	It called for a complete ban on mining, quarrying and sand mining in this area but allowed HEP after scrutiny.
It adopted bottom to top approach i.e. from Gram Sabhas to top.	It calls for top-down approach
It suggested the formation of a Western Ghats Ecology Authority (WGEA), a statutory authority which enjoys the powers under the Environment (Protection) Act	It proposed to strengthen the existing legal framework
The major criticism it faced was that it was more environment-friendly and is not in tune with the ground realities.	Usage of techniques like remote sensing while ignoring ground realities have created many errors in the report

10.3 ENHANCING THE STATUS OF RIVERS

What is the issue?

- The Uttarakhand High Court **declared the rivers Yamuna and Ganga as legal or juridical persons**, enjoying all the rights, duties and liabilities of a living person.
- It is the first time that an element of the natural environment has been declared a legal person.
- Indian courts, previously have granted this status to temple deities, religious books, corporations, etc.,

What was this case about?

- The two issues before the High Court were:
 1. **removal of illegal constructions** on the banks of a canal in Dehradun, and
 2. **the division of water resources** between U.P & Uttarakhand (not resolved since the formation of the new state).
- In December 2016, the High Court directed the removal of the constructions.
- It also directed the constitution of the **Ganga Management Board** (a statutory body under the U.P. Reorganisation Act 2000) and prohibited mining of the Ganga riverbed.
- On the issue of resource division, the court directed the Central government to notify the settlement reached by the two States in a time-bound manner.
- Three months later, when the matter came up before the court once again, the encroachments were still there, the settlement between the States was yet to take place, and the board had not been constituted.

What logical leaps did the court has taken?

- **Extraordinary situation** - First, for the court, an 'extraordinary situation' had been created which required extraordinary measures for the protection of the Ganga and the Yamuna.
- In a clear breach of statutory duties under the U.P. Reorganisation Act, the case had become the one concerning the protection of the health and well-being of the two rivers.
- **Physical & spiritual sustenance** - Second, the court recorded how the rivers provide 'physical and spiritual sustenance' to half the Indian population.
- It found the constitution of the board to be necessary for various purposes including irrigation, water supply, and power generation.
- **Parenspatriae** - Third, the court decides to exercise the **parenspatriae jurisdiction** to declare the rivers and all their tributaries, etc. as living persons.
- It literally 'parent of the country'. It is an inherent power of the sovereign, **and not the courts**, to provide protection to persons unable to take care of themselves.
- In this case, several high level people have been appointed as the **custodians**, i.e., persons who will act in the place of parents for the two rivers.
- These officers are now expected to act on behalf of the rivers for their protection and conservation.

Is there any unanswered questions?

- The High Court's declaration is crisp and it raises several questions.
- In the eyes of the law, living persons such as companies, associations, deities etc., have rights and duties and primary among these being the right to sue and the capacity to be sued.
- Which implies that from now on, **the rivers can sue persons acting against their interests**.
- But what for? Do they have a right not to be a receptacle for tons of sewage? If yes, then who will sue whom?
- **Do other riparian State governments now have less of a role** in the protection of the rivers as they are not the identified custodians?

- The judgment does not take away existing statutory and constitutional rights and duties of citizens and government agencies to counter the pollution and degradation of these rivers.
- What it does do is to identify three officers **who will be the first-line defenders** for the rivers.

What will be impact?

- The Court relies on the copious list of rights that humans have as citizens of India.
- But are these rights enjoyed by the overwhelming majority of the citizens?
- Even a basic right such as security of life and limbs is difficult for women to enjoy from the pre-birth life in a womb till old age.
- Men may do better but not by much, unless they are in the top echelons of income and caste.
- **If we treat them so badly when they are divine, what hope is there that we will do any better calling them human?**

10.4 SEPARATE TIME ZONE FOR NORTHEAST

Why in news?

The Guwahati High Court has dismissed a PIL seeking a direction from the Central government to notify a separate time zone for the Northeast.

What did the judgment say?

- People of Northeast States have often complained about the effect of IST on their lives, and pursued the issue of having a separate time zone.
- It felt that having two time zones would be unsuitable.
- The court cites a high-level committee study that recognized the difficulties faced by a single time zone in eastern India but concluded that IST should nonetheless be retained.

What is the basis of the demand?

- India stretches from 97.4 East in Arunachal to 68 East in Gujarat.
- The time difference between the two extreme points is approximately two hours.
- In the Northeast, the sun rises as early as four in the morning and in winter it sets by four in the evening.
- By the time government offices or educational institutions open, **many daylight hours are already lost.**
- In winters much more electricity has to be consumed.
- Advancing IST by half an hour would result in **saving 2.7 billion units of electricity** every year.

What is Daylight Saving Time?

- DST is the practice of **turning the clock ahead as warmer weather approaches** and back as it becomes colder again so that people will have one more hour of daylight in the afternoon and evening during the warmer season of the year.
- Less than 40% of the countries in the world use DST.
- Countries in equatorial and tropical climates do not observe Daylight Saving Time.
- DST usually starts in March-April and ends in September-November when the countries return to standard time.

Why their demand is getting rejected?

- Two time zones is not advisable for India considering the country's demographics.
- People would have to adjust to multiple time zones & administrative integration would be difficult.
- Indian **railways is not yet automated enough** to handle time shifts mid-journey and this could induce major accidents due to human error.
- There is also a strong **political dimension** to granting a separate time zone.
- The unstated assumption is that the grant of a different time zone is only the **first temporal step towards conceding spatial autonomy**.

10.5 ELEPHANT CENSUS

Why in news?

Four States - Odisha, West Bengal, Chhattisgarh and Jharkhand have decided to conduct elephant census synchronously.

Why this census is significant?

- This will be the first regional synchronous elephant census with an identical set of rules for direct and indirect counting methods.
- The **direct elephant counting method** is based on sightings of elephants.
- In the **indirect method**, surveyors follow a **dung decay formula** for arriving at population estimation which is being used by Tamil Nadu and Karnataka at present.
- A variation of about 8% to 9% has been noticed between the two methods.

What are the advantages of synchronised census?

- According to the 2015 census, Odisha has 1,954 elephants, while Jharkhand, Chhattisgarh and West Bengal have approximately 700, 275 and 130 elephants respectively.
- Elephants travel long distances and an exhaustive information base on regional elephant distribution will help plan a proper intervention for their conservation in the long run.
- The synchronised census will indicate the size, distribution, structure and density of the elephant population in the region.
- A simultaneously conducted census would **eliminate underestimation, duplication**.
- This approach helps to produce a good map on the distribution of elephants in different landscapes, highlighting the abundance and density of elephants.
- This will lead to **better regional planning**.

10.6 EAST KOLKATA WETLANDS

What is the issue?

The state government is planning a "proper utilisation" of the land currently lying along the east Kolkata wetlands.

What is Ramsar Site?

- The east Kolkata wetlands is the biggest ecological asset of the city and a Ramsar Site.
- A Ramsar Site is a wetland (shallow waters) which is designated to be of international importance under the Convention on Wetlands, an intergovernmental environmental treaty established nearly 50 years ago (1971) by UNESCO.
- It came into force in 1975 and takes its name from Ramsar, the Iranian city where the convention was adopted.

What is the significance of East Kolkata Wetland?

- The east Kolkata wetlands are a fascinating natural resource to which tremendous value has been added by traditional knowledge.
- The wetlands have been historically created by a natural shift of the **Bidyadhari, a tributary of the Ganga.**
- The land on which Kolkata is built slopes to the east.
- So the British created canals to take out the city's waste water into in the wetlands.

What happens to this waste water?

- The traditional knowledge is used to treat this waste water.
- For the past century, the waste water has been first fed into settling ponds.
- There the biodegradation of organic components takes place.
- Then the nutrient-rich sewage is transferred into a fish pond to improve the organic quality of the water.
- Fish is grown in this pond and the used water is transferred to fields to irrigate crop.

How else is the wetland helpful?

- In the 12,500 hectares of wetlands, water bodies account for almost 50%, agricultural land - 39%, garbage landfills - 5% and urban and rural settlements over 10%.
- The wetlands grow 10,500 tonnes of fish per year and 150 tonnes of vegetables per day, providing livelihood for over 50,000 people.
- The solid waste brought to the landfills is composted in pits and used for growing paddy and vegetables.
- The natural process saves Rs 500 crore annually in sewage treatment costs.

What is the current problem?

- The government has assured to maintain the balance between ecology and development.
- But the reality is that the wetlands are slowly and steadily disappearing.
- Satellite imagery indicates that in Bhagabanpur, a part of the wetlands, water bodies have shrunk from 77% to 14% of the area since 2002.
- This is corroborated by census data which say that during the 2001-11 decade, there was a fourfold rise in the number of houses and population density in the area.
- The nature of the liquid waste coming to the wetlands from the city is changing.
- The presence of non-biodegradable chemicals is increasing as income and lifestyle in the city change.

- With the increase in lead and mercury used for the manufacture of batteries, paint and glass, city will have to forget about relishing the fish and vegetables that come out of the wetlands.
- Therefore the timely warning to be taken seriously to reduce the chemicals in the sewage and to save the wetlands.

10.7 WASTE WATER

Why in news?

March 22 is celebrated as the World Water Day with this year's theme being 'Waste Water'.

What are the dangers of waste water?

- The sources of waste water are many: domestic, industrial, commercial, agricultural, surface run-off or storm water, and sewer inflow.
- Untreated waste water is contaminated with urban waste containing not only a mix of chemical and biological pollutants, but also high levels of pathogens from excreta.
- This generally impacts human health.
- Waste water is discharged directly into water bodies, overloaded rivers, lakes and the ground with toxic chemicals and wastes.
- This consequently poisons water resources and supplies.
- These toxins feed their way into plants and animals, causing severe ecological toxicity at various levels, including in the human food chain.
- This leads to biological magnification i.e the increasing concentration of a substance, such as a toxic chemical, in the tissues of organisms at successively higher levels in a food chain.
- e.g The River Ganga receives roughly 500 million litres per day (MLD) of partly treated or untreated industrial effluents from over 700 polluting industries, and about 3,000 MLD waste water from urban bodies.
- Globally, only 10% of waste water is treated.
- In India, about 69% of water is untreated
- 39% of its actual operating capacity does not meet the regulatory standards.

What are the various uses of waste water?

- Waste water is a resource in a circular economy.
- Waste water, once treated, can be recycled and/or reused for drinking purposes, in industry, in the artificial recharge of aquifers, in agriculture, in the rehabilitation of natural ecosystems and so on.
- Recycling waste water is not just an ecological imperative.
- By 2050, it is estimated, India will be water-scarce in terms of per capita availability of water per year.
- India's demand for water is growing in all sectors, given continuing economic growth and improving lifestyles.
- Climate change, due to human induced interventions, will affect the variability of water supply in many countries, including India.
- This is difficult to achieve unless water is conserved, recycled and reused.
- It is also crucial to the growth of smart cities.

What is the international practice?

- One of the best international examples in urban water recycling is Yokohama in Japan.
- About 99% of Yokohama's population is connected to sewers.
- It's treated waste water is precious, and is being supplied to various locations of the city.
- Indian smart cities could take a lead from the Yokohama example for maximising their waste water management.

What is the situation in India?

- The National Water Policy 2012 recognises that "recycle and reuse of water should be the general norm".
- Waste water is emerging as a thrust area for investment opportunities and is expected to grow in value and volume.
- But the current waste water treatment market is largely unorganised with small and medium-sized domestic players.
- Market mechanisms need to improve for recycling waste water.

What should be done?

- The governments, at the Centre as well as in the States, should give incentives to various players in this regard.
- In the case of waste water treatment it is imperative to follow WHO guidelines in India.
- e.g These guidelines prescribe discontinuation of irrigation with untreated waste water for a few days before harvesting of crops in order to allow pathogens to die in sunlight.
- These regulatory norms should be strictly enforced.

10.8 NOISE POLLUTION

What is the issue?

A study by a German company across 50 cities in the world finds that noise is robbing nearly two decades of healthy hearing from the inhabitants of Delhi and Mumbai.

What is noise pollution?

- Noise pollution or noise disturbance is the disturbing or excessive noise that may harm the activity or balance of human or animal life.
- Outdoor noise is summarized by the word environmental noise.
- Poor urban planning may give rise to noise pollution.
- Noise can also have a detrimental effect on wild animals.
- It increases the risk of death by changing the delicate balance in predator or prey detection and avoidance, and interfering the use of the sounds in communication, especially in relation to reproduction and in navigation.

What are the levels of discomfort?

- According to a **2015 report commissioned by the European Commission** on the impact of noise on health, it is estimated that that 1.3 billion people worldwide suffer from hearing impairment due to noise exposure.

- World Health Organization (WHO) estimates 10% of the global population is currently exposed to noise levels that could lead to hearing impairment.
- The same body recommends that unprotected exposure to sound levels greater than 100 dB should be limited in duration of four hours and frequency of four times a year.
- Additionally, it should never exceed 140 dB in adults and 120 dB in children.
- But a firecracker normally generates about 125 dB of noise.
- India's Central Pollution Control Board conducts studies of ambient noise in commercial, residential and industrial townships and has found that noise levels in Delhi, Mumbai and Lucknow routinely break the national limit of 75 dB.

What are the findings of the study?

- Age irreversibly destroys the tiny hair in your inner ear, making it harder to hear high-pitched tones.
- The older you are, the less the range of frequencies perceived.
- The study is done by playing tones at various frequencies that cover the range of human auditory perception from **20-20,000 Hz** to the participants.
- It determined how far, on average, people's hearing abilities deviated from what's ideal for their age.
- Residents of Vienna were found to have the smallest average HL of 12.59 years, meaning that a hypothetical 30-year-old had the hearing of a 42-year-old.
- **Delhi performed the worst with an HL of 19.34**, meaning that a 30-year-old Delhiite had the auditory level of a 49-year-old; Mumbai's is 18.58.
- The study also found that 64% of the hearing loss measured in people of a city could be explained by the region's noise pollution levels.

11. INTERNAL SECURITY

11.1 INDIA BANGLADESH FENCE EXPERIENCE

What is the news?

- United States President plans to build a wall along the U.S.' 3,200 kilometer long border with Mexico to keep out the Mexicans is hardly a new idea.
- Several other countries have fenced their borders with their neighbors to keep out illegal migrants, terrorists, and criminals.
- U.S. must learn from the experience of these countries.

Why India built fence?

- India and Bangladesh share a 4,097 km long porous border and the borderland is densely populated.
- The people inhabiting it have numerous cross-border connections, some going back several centuries and others new.
- The decision to build a fence to keep them out was made in the 1980s when the issue of **Bangladeshi migration turned politically explosive** in the northeast Indian state of Assam.

- In a bid to placate Assamese passions, the Indian govt had agreed to put in place a slew of measures, including the construction of a fence to keep out illegal migrants.
- Thus, an eight-foot-high fence of barbed wire, electrified in some stretches, runs along roughly 70% of this border.

Why the fence is not effective?

- Not only are their fences not effective but also, constructing and managing them are **enormously expensive** in terms of money and human lives.
- Smugglers, drug couriers, human traffickers, and cattle rustlers from both sides of the border too continue to cross the border to ply their trade, often with the collusion of border guards.
- Most borders are **too long and too lightly guarded** to have an impact on people moving through that space.
- Where the border runs through rivers, there is no fence.
- Some 44 km of Assam's boundary with Bangladesh passes through the Brahmaputra, a river which changes course every year.
- Besides, the fence has several crossing points where **people with fake documents or bribes can cross the border**.
- As for its efficacy in keeping out terrorists from India, the fence likely has no impact. A terrorist typically has the funds to pay for fake documents and simply cross the border at checkpoints.

Why are fences so popular with governments?

- Border fences have become nationalist symbols.
- They represent the idea of excluding another population i.e., Muslim Bangladeshis in the case of the India-Bangladesh fence.
- They make a government look tough, like it is taking strong action to protect its people from so-called illegals and outsiders.

Why it should not be done?

- The fence is viewed as a symbol of the distrust that underlies mutual perceptions.
- Several people have been gunned down by border guards who have attempted to make their way through fences.
- The killing of Feleni, a 15-year-old Bangladeshi girl in 2011, when she was returning home to Bangladesh, is an example.
- According to Human Rights Watch report, between 2001 and 2010 BSF personnel gunned down an estimated 900 Bangladeshis.
- India's fence-building has had negative impact on its otherwise warm relations with Bangladesh.
- It has enhanced India's image as a bullying big brother in the eyes of the Bangladeshi people.
- Also, India has proposals to build transnational roads and rails. Thus, the fence goes against the spirit and substance of this effort toward greater regional cooperation.

- Bangladesh is a low-lying country. A fifth of Bangladesh's territory is likely to go under water if sea levels rise by one meter. And, this is expected to happen by the end of this century.
- Thus, India cannot afford to turn a blind eye to the problem.
- Not only would that approach be inhumane but also, the impact of rising sea level on India could be as devastating as it is predicted to be on Bangladesh.

What is the way forward?

- Rather than distance itself from Bangladesh on the climate change issue, India should cooperate with it.
- Taking down the fence is an important first step that Delhi must take.
- But dismantling walls is more difficult than building them. It requires political will and a change in mindsets.
- Above all, we must recognize that the India-Bangladesh fence has brought little security to the people.

11.2 INDIA'S NUCLEAR DOCTRINE

Why in news?

Former national security advisor (NSA) Shivshankar Menon has shed new light on India's nuclear doctrine.

What is India's nuclear doctrine?

- India's nuclear doctrine was first enunciated following a Cabinet Committee on Security (CCS) meeting in January 2003.
- Some of the main features of India's nuclear doctrine are -
 1. Building and maintaining a **credible minimum deterrent**
 2. A **No First Use** posture i.e nuclear weapons to be used only in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere,
 3. Nuclear retaliation to a first strike will be "**massive**" and designed to inflict "**unacceptable damage**".
- The concept of "credible minimum deterrence" is used in conjunction with the concepts of "No First Use" and "Non Use" against nuclear weapon states.
- It clearly indicates that India envisages its nuclear weapons as only a deterrent merely for defensive purposes and not as a means to threaten others.

What is the view of former NSA?

- In his book he indicates that India's threat of massive retaliation need not involve nuclear strikes against enemy's urban centres (i.e counter-value or **CV strikes**).
- Instead, India's massive response could take the form of targeting enemy's nuclear arsenal (i.e counter-force, or **CF strikes**).
- This will leave the enemy with a diminished capability of striking back.
- He carefully differentiates between first use and first strike, which refers to a disarming CF strike aimed at leaving an adversary without nuclear recourse.
- So the disarming CF strike need not amount to a 'massive' response, which might include civilian population too.

What are the issues?

- The effectiveness of India to execute a disarming CF strike that takes out most of Pakistan's nukes is also under question.
- Pakistan is building up its nuclear arsenal faster than any other country. It is currently estimated to have 120-130 nuclear warheads.
- It is difficult for India to target are Pakistan's small, highly mobile Tactical Nuke Warheads (TNWs) that are basically truck-mounted, tube-launched artillery.
- Furthermore, any impression in Pakistan of Indian counterforce strikes would incentivize their early use.

IAS PARLIAMENT

PRELIMS BITS

12. ART AND CULTURE

Ochre Colored Pottery (OCP) Culture

- When the Indus Valley Civilization was flourishing, a parallel culture called OCP Culture is thought to have co-existed in the fertile plains between the Ganga and the Yamuna.
- The people who used ochre pottery and their culture are specific to the doab region.
- The first remnants of OCP culture were found in Hastinapur, in Meerut district, in 1951 and later in Etah district of UP. It marked the last stage of the **North Indian Bronze Age** and was succeeded by the Iron Age.
- Pottery Culture in Ancient India -
 1. Indus Valley Civilization - Burnt Black Painted Red Ware
 2. Iron Age (1000 BC) - Painted Grey Ware in North India and the Gangetic plain and Red Polished ware in Gujarat Area.

Kurukh Language

- It is an endangered tribal language of the Dravidian family spoken by the Oraon tribal community.
- Oraon tribes are mainly found in the states of Jharkhand, Chhattisgarh, Bihar, West Bengal and Orissa. They are also found in Andaman Nicobar Island.
- While most of the tribal languages in the Eastern India have their origins in the Austro-Asiatic and Tibeto-Burman families, Kurukh is an exception.
- Recently the language was given **official status in the West Bengal**.
- Previously it was written in Devanagiri Script. Later a script was invented specifically for kurukh, TolongSiki Script.

Tara Tarini Temple

- The Indian Navy has made its new boat "Tarini" based on the design of famous temple Tara Tarini.
- The temple is situated in Kumari hills at the bank of the River Rushikulya, Odisha.
- The word Tarini means "Boat" and its Sanskrit meaning is "saviour". Thus it is considered as a patron deity for sailors and merchants and is worshipped for safety and success at sea.
- The Tara Tarini Shakti Peetha is one of four major ancient Shakti Peethas in India.
- Shakti peetha is originated based on the story of the death of goddess Sati.
- God Shiva who held her dead body, then started his dance of destruction, causing Sati's body to disintegrate and fall into pieces. The sites where these portions of Sati goddess fell are the Shakti peetha.

- **Four Major ShaktiPeethas** in India - Jagannath Temple, Puri; Kamakhya Temple near Guwahati; DakshinaKalika in Kolkata; Tara Tarini near Brahmapur;

Ancient Jainism site in Karnataka

- **Aratipura**, the ancient site which belongs to 9-14th century had been one of the most important Jain religious complexes in Karnataka.
- It is also called as Tipruru and surrounded by the Kanakagiri hills.
- The artefact belongs to the Ganga and Hoyasala dynasties that ruled this region between 9th and 14th century.
- The script and language of the inscriptions found in the site were in the Kannada of the Hoysala period.
- The site is known for the sculpture of Parsvanatha, the 23rd Tirthankara in the Jain pantheon, standing on a lotus pedestal under the hood of a snake.
- There is also a 2.2-metre sculpture of Bahubali stands on ShravanaBetta that predates the one at Sravanabelagola.
- The monolithic statue of Bahubali at Shravanabelagola was carved from a single block of granite.
- It was built by the Ganga Dynasty Minister Chavundaraya in 10th Century and it is 17 m tall, one of the largest free-standing statues in the world.

Kalinjar fort and Neelkanth Temple

- The Kalinjar fort was also built by the Chandela Rulers in the 10th century and the fort served both the Chandela dynasty of Rajputs and the Solankis of Rewa between 10th and 13th Century.
- The fort is called as “The Destroyer of Time” since it is one of the few forts that stood against the invasion of Mahmud of Ghazni.
- The fort lies on a hilly plateau, 1,203 ft above the plains in the Vindhyan Range.
- The Shiva temple built in the kalinjar fort is called as Neelkanth Temple, which is also built by Chandela Rulers in the 10th Century.

13. HISTORY

Titu Mir

- Syed Mir NisarAli, or Titu Mir is a peasant leader who led the Narkelberia Uprising in 1831 against zamindars and British colonial authorities.
- The Narkelberia uprising is often considered as the first armed peasant uprising against the British.
- He constructed a fort of bamboo at Narkelberia and declared independence from the British administration.
- He also fought against Hindu landlords who imposed beard-tax on the Farizis.
- The Faraizi Movement was founded in 1818 by Haji Shariatullah to give up un-Islamic practices and act upon their duties as Muslims. The movement protected the rights of tenants.

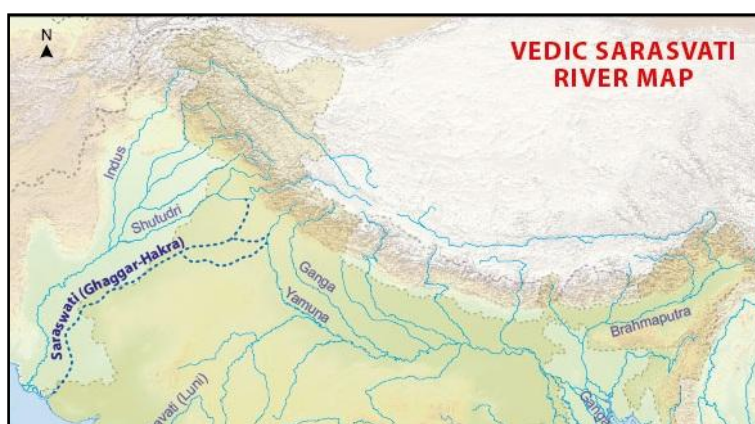
14. GEOGRAPHY

East-Coast Economic Corridor

- It is India's first coastal corridor, covering 1,700 km of the country's coastline.
- The project is funded by Asian Development Bank (ADB).
- The first phase of financing from ADB will fund **Vishakapatnam to Chennai Industrial Corridor** to build key infrastructure in the four main centers along the corridor – Visakhapatnam, Kakinada, Amaravati, and Yerpedu-Srikalahasti in the State of Andhra Pradesh.
- Along with the ADB loans, the project also receives grant from the **Urban Climate Change Resilience Trust** Fund that is managed by ADB to build climate change resilient infrastructure.

Sarasvati River

- The Sarasvati River is one of the main rivers mentioned in the scripture Rig Veda and post-Vedic texts. Some scholars hold that the Sarasvati existed only in myths.
- Others have identified the Sarasvati River with the present day **Ghaggar-Hakra River system**, which flows through northwestern India and Pakistan.
- The Yamuna and Sutlej were considered to be part of Sarasvati.
- They were lost during the Pleistocene the river became fed entirely by monsoon rains rather than glacial streams, during the mid-late Holocene.
- When the monsoons migrated to the east, the river dried and as a result, the civilisation diminished and moved towards the Indo-Gangetic Plain.
- Last year, the Haryana government had released water into a dry channel that was excavated to recreate the river Sarasvati's supposed path.
- Recently the government claimed that the demarcation of the river path is completed and it is no longer a myth.
- Apart from mythological investigation, the greater purpose of the findings will check if these ancient channels can be replenished and used to improve groundwater levels.



Shahpurkandi dam project

- It is a gravity dam that is proposed to be constructed **across Ravi River** in Gurdaspur district in Punjab.
- It will help in providing irrigation facility besides generating hydroelectric power.
- The construction was taken up in 1999 but later halted in 2014 due to dispute between Punjab and J&K. Recently both states signed the pact to resume the work.
- It is located downstream to the RanjitSagar dam, also known as Thein dam.
- Shahpurkandi dam dam will help India utilise its share of waters under Indus Water Treaty.
- Under the Indus Water Treaty, signed between the India and Pakistan in 1960, the waters of eastern rivers (Ravi, Beas and Sutlej) are allocated to India and Western rivers (Indus, Jhelum and Chenab) are allocated to Pakistan.

Koteshwar Hydro Electric Project

- The Koteshwar Dam is a gravity dam on the **Bhagirathi River**, located downstream of the Tehri Dam in Uttarakhand.
- The dam has a 400 MW run-of-the-river power station and it is being implemented by Tehri Hydro Development Corporation (THDC) India Limited.
- In addition to power generation, it will regulate releases from Tehri Reservoir for irrigation and drinking water supply.
- The reservoir of Koteshwar HEP will also act as lower reservoir for under construction Tehri Pumped Storage Hydroelectric project.

Oldest fossil on Earth

- The oldest fossils on Earth were recently discovered in Quebec.
- The rocks might be as old as 4.3 billion years old.
- These fossils are tiny filaments and tubes, **made of haematite**, a type of iron oxide known as jasper.
- Those tubes and filaments are thought to be the remains of bacteria that lived on iron and dwelt around hydrothermal vent systems and mineral-rich hot springs on the seafloor.
- The structures were also found to contain graphite as well as the minerals apatite and carbonate. They are generally associated with biological matter.
- Thus the discovery shows that sophisticated microbes might have been around as early as 4.3 billion years ago.
- The finding also supports the idea that other bodies in the solar system, such as Mars, Jupiter's moon Europa might also support life.

Oldest Plant Fossil

- A pair of 1.6 billion-year-old fossils that appear to contain red algae was found in Chitrakoot in central India.

- This might be the oldest plant-like life discovered on Earth.
- The oldest known red algae until now was 1.2 billion years old.
- Scientists generally agree that large multicellular organisms became common about 600 million years ago.
- This discovery could lead experts to rewrite the tree of life.
- The fossils were embedded in fossil mats of cyanobacteria, called stromatolites.
- **Stromatolites** are layered mounds, columns, and sheet-like sedimentary rocks originally formed by the growth of layer upon layer of cyanobacteria.

Whanganui River

- It is the third longest in New Zealand.
- The local Maori tribe had been fighting to assert their rights over the river since the 1870s.
- Recently the river has been recognised by Parliament as a “legal person” i.e formally declared a living entity.
- It will have its own legal identity with all the corresponding rights, duties and liabilities of a legal person.
- In practical terms, it means the river can be represented at legal proceedings with two lawyers protecting its interests.

Vernal Window

- The transition from winter to the growing season, with rising temperature and melting ice, is referred to as the “vernal window”.
- Historically, the transition into spring is comparatively shorter than other seasons.
- Climate change is altering the timing and duration of the vernal window.
- Research shows that the extent of snow cover over the Northern Hemisphere has declined significantly in the past 30 years leading to warmer winters with less snow.
- This resulted in a longer lag time between spring events and a more extended vernal window.

Monpa

- Monpas live in the Indian state of Arunachal Pradesh, centered in Tawang and West Kameng districts.
- Some also live in the Tibet Autonomous Region.
- They are believed to be the only nomadic tribe in Northeast India, viz., they were totally depended on animals like sheep, cow, yak, goats and horses and had no permanent settlement.
- They are generally adherents of the Tibetan Buddhism and are well known for Thangka paintings.
- Tawang is claimed by India, People's Republic of China and the Republic of China (Taiwan)

India's longest road tunnel

- **Chenani-Nashri tunnel/ Patnitop tunnel**, the longest road tunnel is built on the Jammu-Srinagar National Highway.
- It is also Asia's longest bi-directional highway tunnel with fully transverse ventilation system.
- It is 9.2 km tube tunnel, located at an elevation of 1,200 metre equipped with the world-class integrated tunnel control system and intelligent traffic mechanism.
- Integrated Tunnel control systems will automatically activate fire control, ventilation, signals, communication and electrical systems, power supply, incident detection and no human intervention is required for its operation.
- Once the tunnel becomes operational, it will reduce the traffic jams on National Highway-1A that occur due to snowfall and avalanches in winter.
- National Highway-1A runs between Uri in J&K and Jalandar in Punjab. NH-1A, old numbering now does not exist and it is a part of NH-44 after renumbering.



Hongi

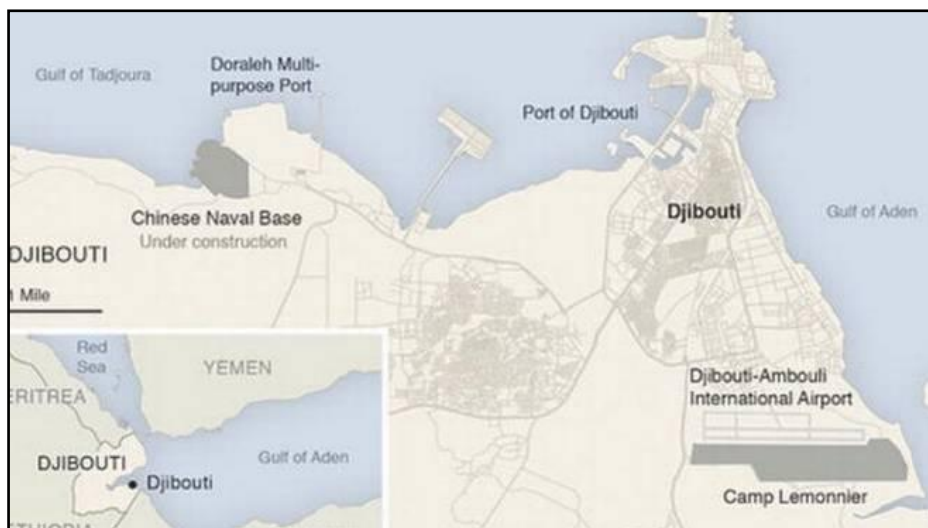
- It is the traditional way of greeting by Maori people.
- The Maori are the native or indigenous Polynesian people of New Zealand.
- Polynesian concepts such as tapu (sacred), noa (non-sacred), mana (authority/prestige) and wairua (spirit) governed everyday Maori living.
- Te Reo Maori is the Maori Language, is an official language of New Zealand.
- The early settlers of Maori in New Zealand hunted the moa - large flightless birds, to extinction.

Fishing communities in India

States	Fishing Communities
Gujarat	Kharvas, Kolis and Macchiyaras
Maharashtra	Kolis
Karnataka	Mogaveeras
Kerala	Mukkuvar, Anjootty, Dheevera, and Pooislan
Tamil Nadu	Pattinavars, Mukkuvars, and Paravas
Andhra Pradesh	Vadabaliyas, Jalaris, Pattapu, and Palles
Odisha	Vadabaliyas, Jalaris, Kaibartas, Khandayats, and Rajbhansis
West Bengal	Kaibartas

China's first overseas military base

- China is constructing its first overseas military base in **Djibouti** and it is located just a few miles from **Camp Lemonnier**, one of Washington's largest installations.
- Camp Lemonnier was established after the terrorist attack of Sept. 11, 2001, is the only permanent U.S. military installation in Africa.



15. POLITY

Section 144 & curfew

- Section 144 of the Criminal Procedure Code (CrPC) prohibits any assembly of five or more people in an area where it has been imposed.
- Every member of such "unlawful assembly" can be booked for "engaging in rioting", maximum punishment for which is three years.
- Further, obstructing police from breaking up an unlawful assembly is a punishable offence as well.
- A curfew by law orders people to stay indoors for a specific period of time. It can be a public order to gain control of violent situations, or can be directed to a specific group.
- Curfew prohibits any person to step outdoors without prior police approval.
- Establishments such as markets, schools, colleges, etc. are ordered to remain shut, and only essential services are allowed to run.

Living Rivers

- Uttarakhand High Court declared that the rivers Ganga, Yamuna and all their tributaries and streams are "living persons."
- Earlier New Zealand river Whanganui became the first in the world to be granted a legal human status.
- It is given the recognition to protect the recognition and the faith of society.

- The court ordered that the Director of the Namami Gange programme, the Uttarakhand Chief Secretary, and the Advocate-General of Uttarakhand would serve as “parents” for the rivers to “protect, conserve and preserve”.

Law Commission Report

- Recently, law commission has submitted its 267th report following SC's request to examine ways to arm the Election Commission to crack down on hate speech in 2014.
- In the report, Law Commission has defined Hate Speech as " It is any word written or spoken, signs, visible representations within the hearing or sight of a person with the intention to cause fear or alarm, or incitement to violence".
- It also proposed a new law - The Criminal Law (Amendment) Bill, 2017, to make speech inciting hatred and speech that causes fear, alarm or provocation of violence, a criminal offence under IPC.
- Law commission is an **executive (non-statutory) body** created by the government from time to time.
- Its primarily comprises legal experts established for a fixed tenure and it works as an advisory body to the Ministry of Law and Justice.
- The Commission was originally constituted in 1955 and is re-constituted every three years. Accordingly, **21st law commission** was constituted in 2015 headed by Justice Balbir Singh for the period of 2015 to 2018.
- Law Commission is requested to work upon specific issues and submit its views assigned by the Law ministry and the Supreme Court on various occasions.

The Employees Compensation (Amendment) Act 2016

- The act was passed by parliament recently, which amends the Employee's Compensation Act, 1923.
- The act ensures compensation up to Rs 1 lakh if an employee is injured in an industrial accident.
- It also penalises an employer if he fails to inform his employee of his right to compensation and impose penalty on the employer in case of any variation in the amount given as compensation given to employee.

16 GOVERNMENT NEW INITIATIVES

Cattle Feed Knowledge Portal

- The **National Dairy Development Board** is an institution of national importance set up by an Act of Parliament of India.
- It was founded by Dr.Verghese Kurien to extend the success of the Amul to other parts of India.
- The major success of this mission was achieved through the World Bank financed Operation Flood, which was responsible for making India the world's largest producer of milk.
- It has recently launched the cattle feed knowledge portal as an interactive knowledge platform on various aspects of compound cattle feed production.

Kamaladevi Chattopadhyaya National Awards

- It is the new award instituted from 2017 by the **Ministry of Textiles**.
- The award is specially to recognize women handloom weavers and women handicraft artisans and to provide them due and economic benefits.
- **Sant Kabir Award** is also under Ministry of Textiles, conferred to outstanding weavers who have made valuable contribution in keeping alive the handloom heritage.
- Only few woman has so far received Sant Kabir Award, thus to promote women weavers kamaladevi award is announced.

International Vision Zero Conference

- The conference is being organized by **Ministry of Labour and Employment**.
- The conference aims to focus on the Occupational Safety and Health issues and challenges in the Manufacturing, Construction and Mining sector.

Jeevan Praman

- It is computer generated digital life certificate for pensioner using their Biometric Credentials.
- Digital Life Certificate is a valid certificate and recognized under the IT Act.
- The system benefits the pensioner from having to go before the Pension disbursing Authority to prove that he/she is alive.
- Pensioners of Central Government, State Government or any other Government organization can take benefit of this facility.

Customs Convention on International Transport of Goods

- Cabinet has given its approval for India's accession to the Customs Convention on International Transport of Goods under cover of TIR Carnets (TIR Convention).
- TIR Convention is an international transit system under the auspices of the United Nations Economic Commission for Europe (UNECE). It came into force from 1975.
- At present there are 70 parties to the Convention, including the European Union.
- The convention facilitates the international carriage of goods from one or more customs offices of departure to one or more customs offices of destination.
- Accession to this agreement would enable India to move goods seamlessly along the International North South Transport Corridor (INSTC) and also boosting trade with the Central Asian Republics and other Commonwealth of Independent States (CIS).

Madhukar Gupta Committee

- A committee under the Chairmanship of Madhukar Gupta was constituted to give a report on border protection and address vulnerabilities in fencing along the Indo-Pakistan border.

- The committee has submitted its report. It recommended measures on the issues of threats and border protection, infrastructure and technology issues for protection of border and administrative issues, assessment and deployment of forces on the border etc.

International Buddhist Conference

- It is a three days conference organized by Ministry of Culture and Nava Nalanda Mahavihara University and inaugurated by The Dalai Lama.
- There were two highlights to this inaugural session.
- One is the release of the reprint of the Pali Tripitaka in Devanagari script.
- The second was the announcement of the opening of the department of the Buddhist science for the first time in Asia.

Science City

- A Science city is similar to a Science Centre, larger in dimension with a focus in frontier areas of Science and Technology and edutainment and financially self sustainable.
- The Science Cities Scheme provides for setting up of Science Cities in all the states of the country.
- The scheme is under the **Ministry of Culture** and the States desirous of setting up a Science City have to provide land, share the cost of setting up of facilities and corpus for upkeep and maintenance.
- The objective of Science City is to popularize science and technology in cities, urban and rural areas for the benefit of students and for the common man by organizing exhibitions, seminars, popular lectures, science camps and various other programs.
- **Criteria** - The location of the Science City should be either a State capital or a city of the State having a sizeable population of not less than 50 Lakhs.
- The primary concern shall be to ensure that it can draw at least 10 lakh visitors per year for self-sustainability.
- Time required for implementation of Science City shall be about 54 months from the start of the construction work

Har Ghar Jal

- It refers to the government's commitment to provide safe tap water on a sustained basis in every household by 2030 as per the United Nations sustainable development goals.
- It also focuses on accomplishing mission of providing safe drinking water to about 28,000 habitations affected by arsenic and fluoride contaminations in the country by 2021.

Vahan and Sarathi

- VAHAN and SARATHI are e-governance initiative of **Ministry of Road Transport and Highways**.
- These are centralized digital online based citizen centric application aims to ease out the processes and curb corruption.

- It aims at facilitating computerization of Road Transport Offices (RTOs) across the country and a common pan-India level same standard for Registration certificate and driving licenses.
- The software VAHAN is for Vehicle Registration and SARATHI for Driving Licenses and compilation of data with respect to Vehicle Registration and Driving Licenses of all the states in State Register and National Register.

India's first Carbon-neutral Panchayat

- Meenangadi in Wayanad district is the India's first carbon-neutral panchayat.
- The carbon-neutral project intends to offset carbon dioxide and other greenhouse gases emitted by human activities through a series of greening initiatives.

Padma Awards

- The Government of India instituted two civilian awards-Bharat Ratna& Padma Vibhushan in 1954.
- The three sub-classes of Padma Vibushan were subsequently renamed as Padma Vibhushan, Padma Bhushan and Padma Shri.
- Bharat Ratna is the highest civilian award of the country.
- It is awarded in recognition of the exceptional service/performance of the highest order in any field of human endeavour.
- The recommendations for Bharat Ratna are made by the PM to the President of India.
- The number of Bharat Ratna Awards is restricted to a maximum of three in a particular year.
- The awardee holds seventh position in the order of precedence in India.
- Padma Awards are conferred on the recommendations made by the Padma Awards Committee, constituted by PM every year. It is headed by the Cabinet Secretary and includes Home Secretary, Secretary to the President and four to six eminent persons as members.
- Padma Vibhushan is given for exceptional and distinguished service, Padma Bhushan for distinguished service of a high order and Padma Shri for distinguished service.
- A higher category of Padma award can be conferred on a person only where a period of at least five years has elapsed since conferment of the earlier Padma award. A relaxation can be made by the Awards Committee.
- The total number of awards should not be more than 120.

17. GOVERNMENT SCHEMES AND POLICIES

Tejaswini

- It is the Scheme under the **Ministry of Finance** for the socio-economic empowerment of Adolescent Girls and Young women.

- The project seeks to empower the adolescent girls with basic life skills and thereafter provide further opportunities to acquire market driven skill training or completion of secondary education.
- It has 3 main components - (i) Expanding social, educational and economic opportunities (ii) improve livelihood opportunities by developing participants' skills (iii) Strengthens women's participation in local governance.
- Recently, India signed financing agreement with **World Bank** (International Development Association) for funding of this scheme.

Jal Kranti Abhiyan

- Jal Kranti Abhiyan is being celebrated every year to consolidate water conservation and management in the country. It was launched on 2015.
- The objectives of Jal Kranti Abhiyan are strengthening Panchayati Raj Institutions and local bodies for Participatory Irrigation Management and enhancing livelihood security through water security in rural areas.
- There are four important components of Jal Kranti Abhiyan viz. Jal Gram Yojana, Development of Model Command Area, Pollution Abatement and Mass Awareness Programme.
- **Jal Gram Yojana** – Under this, two villages in every district (preferably facing acute water scarcity) are being selected as Jal Grams and an integrated water security plan is prepared to ensure optimum and sustainable utilization of water.
- **Funding** - No separate fund have been allotted. Expenditure will be met from existing schemes such as PMKSY, MGNREGA etc.

Nari Shakti Puraskars

- It is the national level award given by the **Ministry of Women and Child Development** on eminent women and institutions in recognition of their service towards the cause of women empowerment.
- The Puraskars are open to all Indian Institutions, organisations and individuals.
- It is conferred every year on the occasion of International Women's Day.

Trade Infrastructure for Export Scheme (TIES)

- **Ministry of Commerce and Industry** has proposed a new scheme "Trade Infrastructure for Export Scheme (TIES)" to enhance export competitiveness.
- The scheme focus on bridging gaps in export infrastructure, creating focussed export infrastructure, first mile and last mile connectivity for export oriented projects and addressing quality certification measures.
- The scheme replaces a centrally sponsored scheme – Assistance to States for creating Infrastructure for the Development and growth of Exports (ASIDE).
- The Central Government funding will be in the form of grant-in-aid, normally not more than the equity being put in by the implementing agency or 50% of the total equity in the project.

- In case of projects located in North Eastern States and Himalayan States including J&K, this grant can be upto 80% of the total equity.

Aam Admi Bima Yojana (AABY)

- AABY is a Government of India Social Security Scheme administered through Life Insurance Corporation of India (LIC).
- It provides Death and Disability cover to persons between the age group of 18 yrs to 59 yrs.
- It is a group insurance scheme providing insurance cover for a sum of Rs 30,000/- on natural death, Rs. 75,000/- on death due to accident, Rs. 37,500/- for partial permanent disability due to accident and Rs. 75,000/- for total permanent disability due to accident.
- The total annual premium under the scheme is Rs. 200/- per beneficiary of which 50% is contributed from the Social Security Fund created by the Central Government and maintained by LIC. The balance is contributed by the State Government / Nodal Agency / Individual.

NaiUdaan Scheme

- It is under the **Ministry of Minority Affairs** for Support to minority students for preparation of Main Examination, who clear Prelims conducted by Union Public Service Commission, Staff Selection Commission, State Public Service Commission etc.
- The objective of the Scheme is to provide financial support to adequately equip them to compete and to increase the representation of the minority in the Civil Services.

Ek Bharat Shrestha Bharat

- It is a programme organized by the Ministry of Human Resource Development.
- It aims to actively enhance interaction between people of diverse cultures living in different States and UTs, with the objective of promoting greater mutual understanding amongst them.
- As per the programme, each year, every State/UT would be paired with another State/UT in India for reciprocal interaction between the people.

18. BILATERAL RELATIONS

Agreement on the Prohibition of Attack against Nuclear Installations

- It is a bilateral agreement signed between **India and Pakistan** in 1988 and came into force in 1991.
- According to this agreement, both the countries will inform each other on 1st January of each year about the location of its nuclear installations and facilities.
- According to the agreement both the countries should refrain from undertaking any surprise attacks on these nuclear installations or encouraging the foreign powers to attack.

- The term "nuclear installation or facility" includes nuclear power and research reactors, fuel fabrication, uranium enrichment, isotopes separation and reprocessing facilities as well as any other installations storing significant quantities of radio-active materials.
- Since 1992, India and Pakistan have exchanged lists every year.

19. INTERNATIONAL EVENTS AND INSTITUTES IN NEWS

ICEGOV 2017

- International Conference on Theory and Practice of Electronic Governance is an international conference series, established by the United Nations University in 2007, with the aim to share the latest in theory and practice of Electronic Governance.
- It is to be hosted by India for the first time.
- It will be organized by **Ministry of Electronics and IT** in collaboration with United Nation University and UNESCO.
- ICEGOV 2017 is the 10th edition of ICEGOV, which will focus on the use of technology to transform relationships between government and citizens, businesses, civil society.

Indian Ocean Rim Association

- IORA was established in 1995 with the objective to bring Economic Cooperation among of the countries of Indian Ocean region, with the Coordinating Secretariat of IORA is located at **Mauritius**.
- IORA has no binding contracts or rigid institutional structures.
- IORA has 21 member states, including Australia, Bangladesh, Comoros, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, UAE, and Yemen.
- For the first time, leaders of the Indian Ocean Rim Association (IORA) met in Jakarta, Indonesia, for a summit.
- **Jakarta Concord** – It is a strategic vision document signed during the meeting for a revitalized and sustainable regional architecture.
- The Meeting drew attention to issues in the greater Indian Ocean region, including maritime security, fisheries management, disaster relief and humanitarian assistance, people-to-people exchanges, trade and investment, and tourism.

International Energy Agency (IEA)

- IEA is a Paris-based autonomous intergovernmental organization established in the framework of the Organisation for Economic Co-operation and Development (OECD) in 1974 in the wake of the 1973 oil crisis.
- It is an important part of global dialogue on energy, providing research, data/statistics, analysis and recommendations on the global energy sector.

- Only member states of OECD can become members of IEA.
- It acts as a policy adviser to its member states, but also works with non-member countries, especially China, India, and Russia.
- India recently declared its “Association” status with the International Energy Agency (IEA).
- The status would facilitate it to participate in meetings of the standing groups, committees and working groups that constitute the IEA governance structure.

Bangladesh Genocide Day

- Bangladesh has announced March 25 as Genocide Day.
- It has been a long-pending demand in Bangladesh, by political parties and civil society, to mark the atrocities committed by the Pakistani army on civilians in the then East Pakistan during the Liberation War in 1971.
- The Bangladesh Parliament passed a resolution calling on the government to observe March 25 as Genocide Day.
- The government would send two senior officials to the UN headquarters in New York and the UN Human Rights Council office in Geneva for international recognition of the day.

Bribery rate in Asia-Pacific

- Recently, **Transparency International** has conducted a survey in 16 Asia-Pacific countries to rank them according to the bribery rate.
- India has the highest bribery rate of 69% when trying to access basic services like education or healthcare.
- It is followed Vietnam (65%) and Thailand (41%).
- China had 26% and Japan had the lowest with 0.2%.
- In ranking countries according to increase in corruption level over the past years, China topped followed by Indonesia and Malaysia.
- Police topped the list of public services most often demanding a bribe.
- In India, 73% of the poorest people paid a bribe for public services.
- Transparency International also publishes another index called “**Corruption Perception Index**”, in which India ranks at 79th position in 2017 among 176 countries.
- Belarus, Brazil, & China shared the same ranks as India and the list was topped by Denmark and New Zealand.

20. NATIONAL INSTITUTES IN NEWS

Central Council for Research in Ayurvedic Sciences (CCRAS)

- Ministry of AYUSH has setup CCRAS as an apex body for formulation, coordination, development and promotion of research in Ayurveda and Sowa-Rigpa on scientific lines and research activities in India.

- Under literary Research, about 3500 palm leaf /paper manuscripts including rare books have been digitized by CCRAS from the different parts of India.
- There are 30 research institutes running all over India under CCRAS and the funds are provided to CCRAS directly under Central Sector Scheme.
- Sowa-Rigpa (Science of healing) commonly known as **Amchi system of medicine** is one of the oldest, Living and well documented medical tradition of the world.
- It has been popularly practiced in Tibet, Magnolia, Bhutan, some parts of China, Nepal, Himalayan regions of India and few parts of former Soviet Union etc.

National Social Security Council

- It is a proposed body to streamline and make policy on social security schemes related to all Ministries.
- It is headed by Prime Minister and members include Finance Minister, Labour Minister, Health and Family Welfare Minister along with employer and employees representatives.
- The council will co-ordinate between central and state governments, monitor the implementation of social security schemes.

Nuclear Command Authority

- The Nuclear Command Authority (NCA) of India is the authority responsible for command, control and operational decisions regarding India's nuclear weapons programme.
- Organisational structure of NCA includes Political Council and Executive Council.
- Executive Council is headed by National Security Advisor and Political Council is headed by Prime Minister.
- The Executive Council gives its opinion to the Political Council, which authorises a nuclear attack when deemed necessary.
- This kind of organisational structure is created to prevent the accidental or unauthorised use of nuclear weapons.

Strategic Forces Command

- SFC is a part of Nuclear Command Authority, responsible to operationalize the directives of NCA and for the management and administration of the country's tactical and strategic nuclear weapons stockpile.
- SFC is headed by Commander-in-chief of the rank of Air Marshal.
- It will have the sole responsibility of initiating the process of delivering nuclear weapons and warheads, after acquiring explicit approval from the NCA.

National Security Council (NSC)

- NSC of India is an executive government agency tasked with advising the Prime Minister's office on matters of national security and strategic interest.

- The members are the National Security Advisor (NSA), the Deputy National Security Advisor (DNSA), the Ministers of Defence, External Affairs, Home & Finance of the GOI.
- It is the apex body of the three-tiered structure of the national security management system in India. The other two are the Strategic Policy Group and the National Security Advisory Board.
- It was established in 1998.

Credible Minimum Deterrence

- Credible Minimum Deterrence is the principle on which India's nuclear doctrine is based.
- It underlines no first use (NFU) with a second strike capability.
- Mutually Assured Destruction (MAD) is another doctrine of military strategy in which a full-scale use of nuclear weapons by two or more opposing sides would cause the complete annihilation of both the attacker and the defender.

University Grants Commission (UGC)

- UGC is a statutory body set up by the Indian Union government in accordance to the UGC Act 1956, under Ministry of Human Resource Development.
- It is charged with coordination, determination and maintenance of standards of higher education.
- It provides recognition to universities in India, and disburses funds to such recognised universities and colleges.
- Recently it was on news for sending a letter addressed to the Registrar of JNU stated that the UGC would stop funding the Centre for the Study of Discrimination and Exclusion.
- Later it clarified that the letter was forged.

Institute of National Importance (INI)

- INI is a status conferred to a premier public higher education institution in India by an act of parliament.
- It is conferred on an institution which "serves as a pivotal player in developing highly skilled personnel within the specified region of the country/state".
- INIs receive special recognition and funding.
- All IITs, NITs, AIIMS, School of Planning and Architecture and Indian Institutes of Science Education and Research are considered Institutes of National Importance.

Nuclear Recycle Board

- Nuclear Recycle Board functions as an entity within Bhabha Atomic Research Centre (BARC) and operates under the purview of BARC Safety Council.
- Nuclear Recycle Board is responsible for the design, construction and construction and operation of nuclear recycle plants involving reprocessing and waste management.

- The operation and maintenance of nuclear recycle facilities in the back end of Pressurized Heavy Water Reactor (PHWR) fuel cycle is under the purview of Nuclear Recycle Board.

Nuclear power reactors in India

Nuclear Power Plants	Types of Nuclear Reactor
Rawatbhata, Rajasthan	Pressurized Heavy Water Reactor (PHWR)
Kaiga, Karnataka	Pressurized Heavy Water Reactor (PHWR)
Kakrapar, Gujarat	Pressurized Heavy Water Reactor (PHWR)
Narora, UP	Pressurized Heavy Water Reactor (PHWR)
Kalpakkam, TN	Pressurized Heavy Water Reactor (PHWR) & Pressurized Fast Breeder Reactor (PFBR)
Tarapur, Maharashtra	Pressurized Heavy Water Reactor (PHWR) & Boiling Water Reactor (BWR)
Kudankulam, TN	Water-Water Energetic Reactor (VVER)

21. ECONOMY

Advance Pricing Agreement (APA)

- An APA is a contract, usually for multiple years, between a taxpayer and at least one tax authority specifying the pricing method that the taxpayer will apply to its related-company transactions.
- It was introduced in IT act, 2012.
- It helps taxpayers voluntarily resolve **transfer pricing disputes** in a cooperative manner reducing the incidence of double taxation.
- It also involves resolving both the future and existing transfer pricing audits and adjustments.
- It fosters a non-adversarial tax regime.
- The Indian APA programme has been appreciated nationally and internationally for being able to address complex transfer pricing issues in a fair and transparent manner.
- **Unilateral APA** – It involve agreements between only the taxpayer and one government.
- **Bilateral APA** – Tax payer enter into APA with more than one tax authority.
- **Transfer Pricing** - A transfer price is the price at which different divisions of a same company transact good or services with each other.
- Transfer pricing are used when individual entities of a large multi-entity firm are treated as separately run entities.

National Infrastructure Investment Fund (NIIF)

- The NIIF is a trust that raises debt to invest in the equity of infrastructure finance companies.
- Thus it acts like a bankers' bank in infrastructure financing.

- Government owns 49% of NIIF.
- It provides equity support to NBFCs/ Financial Institutions (FIs) engaged in infrastructure financing.
- It also provides equity/ debt to commercially viable projects, both greenfield and brownfield, including stalled projects.
- NIIF will be established as one or more Alternative Investment Funds (AIF) under the SEBI regulations.
- A typical sovereign wealth fund (SWF) will be a state-owned investment company owned by governments and invests their own money in foreign countries.
- Though the NIIF acts like an SWF, it does not invest in assets such as stocks, bonds, real estate, commodities etc like an SMF do and therefore cannot be called so.

Wholesale Price Index (WPI)

- The government may launch the Index of Industrial Production (IIP) and the Wholesale Price Index with new base year 2011-12 by April-end. The current base year is 2004-05.
- Wholesale Price Index (WPI) represents the price of basket of goods at a wholesale stage i.e. goods that are sold in bulk and traded between organizations instead of consumers.
- WPI is calculated by the Office of Economic Advisor, DIPP under Ministry of Commerce and Industry.
- The components of WPI include Primary articles, Manufacturing items, fuel and power. The manufacturing items is given the most weightage.
- WPI basically indicates the rise in profitability of industries.

Consumer Price Index:

- Consumer Price Index (CPI) measures changes in the price level of market basket of consumer goods and services purchased by households.
- Presently the consumer price indices compiled in India are CPI for Industrial workers CPI (IW), CPI for Agricultural LabourersCPI(AL) and; Rural Labourers CPI(RL) and (Urban) and CPI(Rural).
- The CPI(IW) and CPI(AL& RL) are compiled by Labour Bureau, the other indices are compiled by Central Statistical Office (CSO) under Ministry of Statistics and Program Implementation with 2010 as the base year.
- The components of CPI includes food, beverages, tobacco; Housing; Fuel and light; Clothing, bedding, footwear.

Index of Industrial Production (IIP)

- IIP denotes the level of economic activity in different sectors, including manufacturing, mining and power.
- It is calculated by Central Statistical Office (CSO) under Ministry of Statistics and Program Implementation.
- Within IIP, there are 8 core industries which includes Coal, fertilizer, electricity, crude oil, natural gas, refinery products, steel, and cement.
- The manufacturing is given the highest weightage followed by mining and electricity.

IRDAI

- The Insurance Regulatory and Development Authority of India (IRDAI) is an autonomous, statutory body created by IRDA act, 1999.
- It is a ten member team consisting of a Chairman, five whole-time members and four part-time members, appointed by the Government of India.
- It was created based on the recommendations of the **Malhotra Committee**.
- It is headquarters in Hyderabad.
- The functions of IRDA includes regulating the insurance industry and protects the customers, promotion of competition to enhance customer satisfaction and lowering premiums for ensuring the financial security of the insurance sector.

Border Adjustment Tax

- It is a newly proposed tax in USA.
- It is a destination-based cash flow tax.
- Imported goods purchased/consumed domestically are subject to the tax while goods produced domestically and sold internationally are exempt.

Automotive Mission Plan 2026

- Automotive Mission Plan 2026 has been finalized jointly by the Government of India and Indian Automotive Industry.
- **Aim –**
 1. To bring the Indian Automotive Industry among the top three of the world in engineering, manufacture and exports of vehicles & components
 2. To grow growing in value to over 12% of India GDP and
 3. To generate an additional 65 million jobs.
- **Objective -**
 1. To propel the Indian Automotive industry to become the engine of the “Make in India” programme.
 2. To make the Indian Automotive Industry a significant contributor to the “Skill India” programme.
 3. Promote safe, efficient and comfortable mobility for every person in the country, with an eye on environmental protection and affordability through both public and personal transport options.
 4. To seek increase of net exports of the Indian Automotive industry several fold.
 5. Promote comprehensive and stable policy dispensation for all regulations impacting the industry.

22. ENVIRONMENT

Prosopis Juliflora

- *Prosopis Juliflora* is a shrub or small tree in the family Fabaceae commonly known as Seemai Karuvelam.
- It is native to Mexico, South America and the Caribbean.
- It was initially introduced in India during colonial times.
- Later in 1960s it was Seed Bombed i.e. aeri ally seeded by helicopter in Southern Tamil Nadu to meet firewood demand.
- Since then it has become invasive species.
- It causes stomach poisoning in livestock by inducing a permanent impairment of its ability to digest cellulose.
- It causes drying up of water bodies and ground water as it absorbs more than 4 litres of water to obtain one kg of biomass.
- It cannot even shelter birds as it produces less oxygen and more carbon dioxide.
- It causes land erosion due to the loss of the grasslands that are habitats for native plants and animals.
- Dispersal of the species is mainly through animals by endozoochory (dispersal by vertebrate animals).
- Other modes of seed dispersal are –
 1. Autochory – Self dispersal
 2. Barochory - Dispersal by gravity
 3. Anemochory - Dispersal by air
 4. Hyderochory – Dispersal by water
 5. Chiropterochory – Dispersal by bats
 6. Epizoochory – Dispersal by Non-vertebrate animals

World Wildlife Day (WWD)

- United Nations General Assembly in 2013, designated 3rd March of every year as UN World Wildlife Day, marking the day of adoption of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- It is celebrated to raise awareness of the world's wild animals and plants.
- The CITES Secretariat is the facilitator for the global observance of this special day for wildlife on the UN calendar.
- The World Wildlife Day 2017 was celebrated under the theme “**Listen to the Young Voices.**”

World Water Day

- World Water Day is an annual event celebrated on 22 March.

- The day focuses attention on the importance of universal access to clean water, sanitation and hygiene (WASH) facilities in developing countries.
- UN-Water, an inter-agency entity of the United Nations selects a theme for each year.
- The theme for 2017 is 'Why waste water?'

Clean Ganga Fund

- Clean Ganga Fund was set up to contribute towards the conservation of the river Ganga.
- It encourages contributions from Resident Indians, Non-Resident Indians, Persons of Indian Origin, Institutions, and Corporate towards Ganga Rejuvenation.
- Domestic donors to the Fund shall be eligible for tax benefits and Foreign donors could get suitable tax exemptions in domestic law, wherever permissible.
- CGF will be operated through a bank account by a Trust headed by Union Finance Minister.
- The secretariat of the Trust will be set up in Ministry of Water Resources, River Development and Ganga Rejuvenation under the Mission Director, Clean Ganga.
- CGF will be used for implementing 'NamamiGange' programme, controlling of non-point pollution, setting up of waste treatment and disposal plants along the river around the cities, conservating the biotic diversity of the river, Ghat redevelopment, R&D etc
- The Fund shall not be utilized for activities such as dredging i.e underwater excavation to gather up bottom sediments and disposing them at a different location.

New Tiger Reserves in Uttarakhand

- The Uttarakhand state is soon to get two new tiger reserves.
- The **Nandhaur Wildlife Sanctuary** across India and Nepal and **Surai Range** in Terai are the two proposed tiger reserves.
- Presently, the state has two tiger reserves – the Corbett tiger reserve and the Rajaji tiger reserve.
- With the addition, Uttarakhand would become the first state in North India to get four tiger reserves.
- Uttarakhand state has the second highest tiger population in the country after Karnataka.
- Corbett tiger reserve is also the oldest national park in India and it was the first to come under the Project Tiger initiative.
- To get the tiger reserve status to a national park, the state government has to send a proposal to National Tiger Conservation Authority (NTCA). After NTCA has given its final approval, the State Government can notify the tiger reserve based on NTCA recommendation.
- The National Tiger Conservation Authority is a statutory body created under Wildlife (Protection) Act, 1972, for strengthening tiger conservation.

Ropar Wetland

- Recent Asian Waterbird census revealed that only fewer winter migratory water birds from central and north Asia were sighted at the Ropar Wetland.
- Asian Waterbird census is part of International Waterbird census of Wetlands International, South Asia.
- Ropar in Punjab is a riverine wetland and it has been designated as Wetlands of International Importance i.e.Ramsar Site.
- The Convention on Wetlands was created after an intergovernmental treaty signed in Ramsar, Iran in the year 1971 for the conservation and sustainable use of wetlands.
- The convention entered into force in India on 1 February 1982 and India currently has 26 Ramsar sites.
- The **Montreux Record** is a register of wetland sites on the List of Wetlands of International Importance where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference.
- The record is maintained as part of the Ramsar List.

India's largest floating Solar PV Plant

- Recently, NTPC has installed India's largest floating solar photovoltaic (PV) plant at Rajiv Gandhi Combined Cycle Power Plant (RGCCPP) at **Kayamkulam in Kerala**.
- Such floating solar panel system saves land usage and could be installed on saline water environment.
- It has various benefits like conserving water through reduction of evaporation, increased power generation due to cooling effect on the panels, reduced installation time.

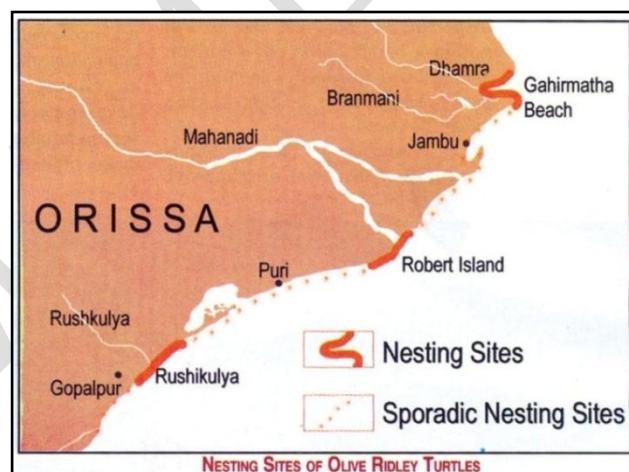
Earth Hour

- Recently, the world wide movement "Earth Hour" celebrates its 10th anniversary.
- Conservation Group World Wide Fund for Nature (WWF) organizes Earth Hour every year to encourage everyone to turn off lights for one hour as symbol of their commitment towards climate change.
- The event was originated in Sydney, Australia in 2007.
- Earth Hour is scheduled on the last Saturday of every March, closely coinciding with the equinox to ensure most cities are in darkness as it is rolled out around the world.

Olive Ridleys

- There are seven species of marine turtles in the world.
- Olive ridleys are similar to the Kemp's ridley sea turtles. The two species are the smallest of all sea turtles.
- Olive ridleys are omnivorous in diet and primarily found in tropic regions of Atlantic, Pacific and Indian Oceans.

- They nest twice or thrice in a year on the Pacific shores of the American tropics, as well as in the Indian Ocean and along the northeast coast of South America.
- They are known for their behavior of synchronized nesting in mass numbers, termed **arribadas**.
- Female sea turtles always return to the beach where they were born, their natal beach, to lay their eggs.
- Incubation takes about 60 days and the temperature of the sand governs the incubation time.
- An increase in sand temperature keeps the incubation time shorter, influencing the determination of sex of the hatchlings.
- A shorter incubation leads to more female hatchlings whereas cooler sand has longer incubation time and produces more males.
- The nesting season ranges worldwide from June to December, with the peak period in September and October.
- They are listed as Vulnerable in IUCN Red List and in Appendix I of CITES.
- Turtles are adapted to aquatic life whereas Tortoises are almost exclusively land-dwelling animals. The term “terrapins” is sometimes used for turtles that are semi-aquatic.



Nasi II island

- The island is part of Gahirmatha Scantuary in Odisha, one of the world's largest nesting ground of olive ridley turtles.

Animal Welfare Board of India

- The Animal Welfare Board of India (AWBI) is a statutory advisory body under the Union Ministry of Environment, Forests and Climate Change (MOEF).
- It derives its legal structure from the prevention of Cruelty to Animals Act, 1960.
- It is headquartered in Chennai, frames a range of rules on how animals ought to be humanely treated everywhere.
- The term of the office of Members is 3 years and presently consists of 22 members from several government organizations along with animal rights activists and parliamentarians.
- Recently, the Ministry of Environment issued a notification saying that the board will be permanently chaired by a senior MoEF official.
- Some of the functions performed by AWBI

1. To advise the Central Government on the matters relating to the medical care provided in animal hospitals.
2. To advise the Government related to the design of slaughter houses and vehicles to lessen the burden on draught animals.
3. To give financial assistance to animal welfare organizations, rescue establishments and animal hospitals

23. SCIENCE AND TECHNOLOGY

SPACE

MAVEN

- The Mars Atmosphere and Volatile Evolution (MAVEN), NASA's spacecraft, has been orbiting Mars for the past two years.
- MAVEN is studying Mars' upper atmosphere, ionosphere and its interactions with the sun and solar wind.
- An important aspect of the MAVEN mission is studying how early Mars lost much of its atmosphere.
- This atmospheric loss may have been partially responsible for Mars' transition from a planet capable of supporting liquid surface water to the dry, desert world we know today.
- Recently, MAVEN has avoided its head-on collision with Phobos, the natural satellite of Mars.
- The other one is Deimos. Phobos is the innermost and larger of the two.

Satellite Missions for forecasting Natural Disaster by ISRO

- Megha-Tropiques is a joint **Indo-French** satellite mission aims to study the water cycle in the tropical atmosphere and describes the evolution of major tropical weather systems.
- The Satellite with ARGOS and ALTIKA (SARAL) is also a joint **Indo-French** satellite mission for oceanographic studies.
- SARAL performs altimetric measurements designed to study ocean circulation and sea surface elevation.
- The NASA-ISRO Synthetic Aperture Radar (NISAR) mission is a **joint project between NASA and ISRO** to co-develop and launch a dual frequency synthetic aperture radar satellite.
- NISAR aimed to measure the changes on earth's land surface, ice surface, glaciers, earthquakes and volcanoes & to find causes and consequences of such changes.
- It will be launched by 2020 and it will be the first satellite mission to use two different radar frequencies (L-band and S-band).

Brown dwarfs

- Brown dwarfs are objects which are too large to be called planets and too small to be stars.

- The mass of brown dwarfs is too small for full nuclear fusion of hydrogen to helium to take place i.e to become fully-fledged stars, but usually more massive than planets.
- Recently scientists have identified a brown dwarf, located at 750 light years away in the constellation of Pisces.
- It is made of gas that is around 250 times purer than the sun, hence consists of more than 99.9% hydrogen and helium.
- It is about 90 times as massive as the planet Jupiter, making it the most massive brown dwarf found to date.
- 3 Criteria given by International Astronomical Union (IAU) to classify any celestial body as planet,
 1. It needs to be in orbit around a any fully fledged star.
 2. It needs to have enough gravity to pull itself into a spherical shape.
 3. It has cleared the neighbourhood around its orbit.

DEFENCE

Ballistic Missile Defence

- Recently, Advanced Air Defence (AAD) is been successfully tested from Abdul Kalam Island off the coast of Odisha, intercepting the incoming enemy missile at the range of 15-30 km.
- **Advanced Air Defence (AAD)**/ Ashvin Advanced Defense interceptor is capable of destroying missiles at **endo-atmosphere** altitudes of 20-40 kilometers.
- It is part of India's two tiered ballistic missile defence.
- The other is the **Prithvi Air Defence (PAD)** / Pradyumna Ballistic Missile Interceptor capable of destroying missiles at **exo-atmospheric altitudes** of 50–80 kilometers which was tested last month.
- The Ballistic Missile Defence shield is expected to be achieved by 2022.
- India is the fifth country to have Ballistic Missile Defence. The other countries are US, Russia, Israel and China.

Kalvari Class Submarine

- Recently, Indian Navy test-fired an **anti-ship missile** for the first time from an indigenously built Kalvari class submarine.
- Kalvari, the first of India's six Scorpene-class submarines which are being built under the Project 75.
- Project 75 aims to deploy a class of **Diesel- electric submarine** with Air independent propulsion system.
- Conventional diesel-electric submarines have to surface every few days to get oxygen to recharge their batteries.
- With Air-independent propulsion (AIP) systems, they can stay submerged for much longer periods thereby improving its stealth capability, as it enables to recharge its batteries while being submerged.

INS Viraat

- INS Viraat, the second aircraft carrier in the Indian naval fleet is soon to be decommissioned. INS Vikrant is India's first aircraft carrier.
- Earlier known as HMS Hermes, it served Royal Navy of UK from 1950 to 1980's and later re-commissioned in Indian Navy in 1987.
- It holds the Guinness Record for being the oldest-serving warship.
- It played a pivotal role in the Indian peacekeeping operations in Sri Lanka and the 1999 Kargil War.
- It also took part in major operations like Op. Parakram– India&Pakistan faceoff in the LOC and Op. Pawan by IPKF to take control of Jaffna from the LTTE as part of the Indo-Sri Lankan accord.

INS Vikramaditya

- INS Vikramaditya is a Kiev class aircraft carrier which was commissioned by Russian Navy in 1987 under the name Baku.
- It was later renamed as Admiral Gorshkov and later offered to India in 2004.
- It is the biggest and heaviest ship to be operated by the Indian Navy.
- Recently, Indian Navy has successfully launched the first trial of the recently installed Surface-to-Air missile system from its aircraft carrier INS Vikramaditya.

INS Tillanchang

- The Indian Navy has recently commissioned a new indigenously designed and built **Car Nicobar-class** high-speed offshore patrol vessel, the INS Tillanchang.
- It is a Water Jet Fast Attack Craft (WJFAC).
- It is the **first water jet propelled vessels** of the Indian Navy.
- Production of the class was fast-tracked after the 2008 Mumbai attacks.
- The vessels are designed as a cost-effective platform for patrol, anti-piracy and rescue operations in India's Exclusive Economic Zone, Humanitarian Assistance and Disaster Relief.
- The vessels can also be used for the interception of fast moving surface craft, anti-smuggling and fisheries protection.
- The first two ships of the class, INS Tarmugli and Tihayu were commissioned in 2016 and are based at Visakhapatnam.
- **INS Tillanchang** is the third ship of four follow-on WJFAC and it is an upgrade from the Chetlat class of Fast Attack Craft that the Indian Navy possesses.

Brahmos Missile

- It is the supersonic cruise missile that can be launched from land, sea, sub-sea and air based platforms.

- It is developed by a joint venture between DRDO of India and NPOM of Russia.
- It is a two-stage missile with a solid propellant booster engine in its first stage and the liquid ramjet engine in the second stage.
- The missile has flight range of up to 290 km with supersonic speed all through the flight, making it the first supersonic cruise missile.
- It can carry a conventional warhead weighing 200 to 300kgs.
- It uses Transport Launch Canister (TLC) for transportation, storage and launch.
- It is also the world's fastest anti-ship cruise missile in operation.
- Recently, **Brahmos Extended Range (ER) Missile** was successfully test fired.
- Brahmos ER missile is capable of hitting the enemy targets at much higher range than the current range of 290 km with the supersonic speed of 2.8 Mach.
- This technology upgrade comes after India's full membership to the Missile Technology Control Regime (MTCR), which removed caps on range of Brahmos cruise missile.

Tupilov Aircraft

- Indian Navy's iconic iconic Tupolev-142M anti-submarine warfare aircraft will be decommissioned soon.
- It was inducted in to Indian navy from erstwhile USSR in 1988.
- It is a long range maritime patrol aircraft inducted in INS Rajali and it is the fastest turboprop aircraft in the world.
- The aircraft has been mainly used for long range maritime reconnaissance and anti-submarine warfare operations.
- It was deployed in operations like operation cactus in maldives, operation Vijay and operation Parakram in 2002 and anti-piracy operations from 2011 to till date.
- The aircraft will be replaced by the newly inducted Boeing P-8I aircraft.

Shanti Prayas

- Shanti Prayas is a Global Peace Operations Initiative (GPOI) exercise designed to train defense personnel for participation in United Nations (U.N.) peacekeeping missions.
- It is a multinational Peacekeeping Exercises conducted annually and the previous editions were held in Nepal in 2000 & 2013.
- The third edition Shanti Prayas III is being held in Nepal and will end on April 7.
- Throughout the exercise, participants receive training in skills required to successfully carry out U.N. peacekeeping mission mandates.

- India, Pakistan, Nepal and Bangladesh are among the largest contributors of troops to the UN peacekeeping forces.
- Some of the participating countries in Shanti Prayas III are Nepal, India, Bangladesh, Pakistan, Sri Lanka, South Korea, U.S, U.K, Canada, Japan, Australia, New Zealand and others. China is not a part of this exercise.

BIOTECHNOLOGY

CRISPR

- CRISPR stands for Clustered Regularly Interspaced Short Palindromic Repeats.
- CRISPR - Cas9 is a most prominent **genome editing technique** done by targeting specific stretches of genetic code to edit DNA at precise locations.
- The technique allows researchers to permanently modify genes in living cells and organisms and to correct mutations at precise locations in the human genome to treat genetic causes of disease.
- It can be used to target multiple genes simultaneously and can also activate gene expression instead of cutting the DNA.
- Recently, a team in china has corrected genetic mutations in three normal human embryos using this technique and it is the first to describe the results of using CRISPR in viable human embryo.

Shortest-Duration Cotton Variety

- One of the main reasons for repeated failure of dryland cotton crop is its long duration i.e around 170-240 days.
- This extends well beyond the monsoon months.
- These plants then go without water during the crucial time of flowering and fruiting and suffer weak uptake of nutrients.
- Central Institute for Cotton Research has developed what is reported to be the shortest-duration cotton variety in the world, tentatively named Yugank.
- It requires only 100-120 days for maturity.
- This could emerge as the solution to the problems of dryland cotton farmers.
- Another advantage of shorter-duration cotton is that the fibre quality is better. The longer the duration, the weaker will be the fibre.

OTHERS

World's largest artificial Sun

- The artificial sun is made up of a honeycomb of 149 spotlights, which together make the structure known as "Synlight", located in Germany.
- The lights are designed to focus on a single spot and produce the equivalent of 10,000 times the amount of solar radiation that would normally shine on the same surface.

- Such light is in rare supply in Germany at this time of year and thus it provides new ways of making hydrogen and exploring cleaner energy sources.
- This is used in separating atomic hydrogen from the water (H₂O).

24. SCIENCE

Pneumococcal conjugate vaccine (PCV)

- Pneumococcal vaccines are vaccines against the bacteria *Streptococcus pneumoniae* and can prevent cases of pneumonia, meningitis, and sepsis.
- Pneumonia caused by the pneumococcus bacteria is supposed to be the most common.
- It is spread from person to person through close contact.
- PCV is a mix of several bacteria of the pneumococci family, which are known to cause pneumonia — hence 'conjugate' in the name.
- Pneumonia is responsible for about 20% of under-5 child mortality in India, of which half are of pneumococcal origin.
- It estimated around 23% of the global pneumonia cases originate in India.
- PCV has been introduced in the Universal Immunisation Programme recently.

Time Crystals

- The idea of time crystals was first proposed by Nobel-Prize winning theoretical physicist Frank Wilczek in 2012.
- Time crystals are unique in that they **exhibit movement even when in their lowest energy or "ground" state**.
- This ability violates a fundamental symmetry in physics called time-translation symmetry i.e the laws of physics must work in the same way in all places and all times.
- They can never reach equilibrium, otherwise known as non-equilibrium matter.
- What this seems to mean is that these crystals **possess innate energy** despite being mostly inert, which is anomalous for anything.
- The reason these crystals are called "time crystals" is because their **unique features shouldn't change over time**, and thus will possess an innate ability of movement forever.
- It isn't yet clear what exactly time crystals will be used for, but some have proposed the use of non-equilibrium matter to **revolutionize quantum computing**.
- Recently two separate teams of physicists described ways of actually creating such structures.

- Being able to create them would mean a leap forward in creating quantum computers i.e a computer which makes use of the quantum states of subatomic particles to store information.

Super fluids

- Super fluids are fluids with zero viscosity i.e they flow without loss of kinetic energy.
- When stirred a superfluid forms cellular vortices that continue to rotate indefinitely.
- Super fluidity occurs in two isotopes of helium (helium-3 and helium-4) when they are liquified by cooling to cryogenic temperatures.

Repatha

- It is a new drug can reduce cholesterol levels to almost never seen naturally in adults.
- It was tested recently and it is proven that it would significantly reduce the chance of a high-risk patient having a heart attack or stroke.
- It would be used to help men and women who had exhausted all other options.
- It was approved by the U.S. Food and Drug Administration in 2015 with the hope that they would lower the risk of heart attacks and strokes, and not just reduce levels of LDL cholesterol.

Mahi

- Mahi is Assam's ancient herbal ink.
- It was used in early and medieval Assam for writing on 'sancipat' (folios made of the bark of the sanci tree) manuscripts.
- It has a protective effect on manuscripts because of its anti-fungal properties.
- The endurance of the ink is proven by the stability of sancipat manuscripts.
- Acidic iron gall ink was in use at the same time in Europe.
- Unlike Mahi, gall ink can render documents illegible by causing loss of text, bleeding and fading due to ink corrosion.
- Another feature is that the pH of mahi remains neutral because of cow urine and the absence of acidic ingredients like vinegar. But Iron gall ink has an acidic character that leads to destruction of the manuscripts.

Sleeping Beauty Syndrome

- It is a rare sleep disorder, also known as **Kleine-Levin Syndrome**.
- The syndrome is characterized by persistent and reoccurring feelings of excessive tiredness and prolonged sleep.
- It is very rare, occurring at a rate of one in a million and there is no known cure.

- The condition primarily affects adolescent males, though females can also be affected and the age of onset varies.
- It was added to the International Classification of Sleep Disorders in 1990.

Multiple Sclerosis (MS)

- MS is a chronic, inflammatory, autoimmune disease of the central nervous system that disrupts communication between the brain and other parts of the body.
- The cause is not clear but the underlying mechanism is thought to be either destruction by the immune system or failure of the myelin-producing cells
- It is among the most common causes of neurological disability in young adults and occurs more frequently in women.
- United States Food and Drug Administration has recently approved Ocrevus (ocrelizumab) to treat adult patients with relapsing forms of MS.

25. MILITARY EXERCISES IN NEWS

Al Nagah-Ii 2017

- It is joint military exercise between the Indian and Oman armies.
- This year edition is being held at Himachal Pradesh and 2015 edition was held in Muscat, Oman in 2015.
- The aim of this exercise is to improve the interoperability in conducting joint operations in the backdrop of counter insurgency/ counter terrorism environment.

Surya Kiran

- It is the joint Indo-Nepal military exercise.
- The Eleventh edition of this exercise is being held at Pithoragarh in Uttarakhand.
- The exercise aimed at training of troops in counter insurgency operations in mountainous terrain.
- It formally incorporates issues related to humanitarian assistance and disaster management (HADR).

Joint Exercises

Minister of State for Defence recently released the joint military exercises conducted by India in the past 3 years.

Joint Exercises conducted by Army

No.	Country	Exercise
1.	Australia	Ex AUSTRALIA HIND
2.	Bangladesh	Ex SAMPRITI
3.	China	Ex HAND IN HAND
4.	France	Ex SHAKTI
5.	Indonesia	Ex GARUDA SHAKTI
6.	Kazakhstan	Ex PRABAL DOSTYK
7.	Kyrgyzstan	Ex KHANJAR
8.	Maldives	Ex EKUVERIN
9.	Mongolia	Ex NOMADIC ELEPHANT
		Ex KHAN QUEST
10.	Nepal	Ex SURYA KIRAN (BIANNUAL)

11.	Oman	AL NAGAH (SUCCESS)
12.	Russia	Ex INDRA
13.	Seychelles	Ex LAMITIYE
14.	Singapore	Ex AGNI WARRIOR
		Ex BOLD KURUKHESTRA
15.	Sri Lanka	Ex MITRA SHAKTI
16.	Thailand	Ex MAITREE
		Ex COBRA GOLD (Observer Plus)
17.	UK	Ex AJEYA WARRIOR
18.	USA	Ex YUDHABHAYAS
		Ex VAJRA PRAHAR

Joint Exercises conducted by Navy

S. No.	Country	Exercise
1.	Australia	AUSINDEX
		KAKADU
2.	Brazil & South Africa	IBSAMAR
3.	Brunei	ADMM+ Exercise (Multilateral)
4.	France	VARUNA
5.	Indonesia	IND-INDO CORPAT (Bi-annual)
		IND-INDO BILAT
		Ex KOMODO (HADR) (Multilateral)
6.	Malaysia	ARF DIREx
7.	Myanmar	IMCOR
8.	Oman	Naseem-al-Bahr
9.	Russia	INDRA NAVY
10.	Singapore	SIMBEX
11.	Sri Lanka	SLINEX
		IN-SLN SF Exercise
12.	Thailand	INDO-THAI CORPAT (Bi-annual)
13.	UK	KONKAN
14.	USA	MALABAR
		RIMPAC (Multilateral)

Joint Exercises conducted by Air Force

S. No.	Country	Exercise
1.	France	Ex GARUDA-V
2.	Oman	Ex EASTERN BRIDGE-IV
3.	Russia	Ex AVIAINDRA-14
4.	Singapore	JOINT MILITARY TRAINING
5.	Thailand	SIAM BHARAT
6.	UAE	Ex DESERT EAGLE-II
7.	UK	Ex INDRADHANUSH-IV
8.	USA	Ex RED FLAG