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I. POLITY & GOVERNANCE

TOPIC: GS II, CYBER CRIMES

1. Centre wants Supreme Court to be strict with social media

Source: The Hindu

Why in news:

- Government has found the efforts by Internet giants to curb circulation of online videos of sexual violence against women and children inadequate and seeks “stricter directions” to service providers, such as Facebook and YouTube from the Supreme Court.
- It will significantly reduce the time taken by the intermediary to comply with content removal requests under certain Sections of the IT Act to less than 10 hours from about 36 hours at present.

<h3>Nailing a menace</h3> <p>What the Centre is seeking vis-à-vis curbing of perverse graphic videos on Facebook, Youtube and WhatsApp</p>		
 <p>FAST TRACK: Reducing the time taken by service providers</p>	<p>(FB, Youtube) to accede to content removal requests to less than 10 hours from about 36 hours at present</p> <p>SPOT AND KILL: The Centre wants service providers to engage</p>	<p>agencies to spot and remove sexually violent content, especially those related to child pornography and rape</p> <p>TRACING THE ROOTS: The Centre also wants service providers to be able to identify the origin of such content</p>
	<p>agencies to spot and remove sexually violent content, especially those related to child pornography and rape</p>	

Monitoring Tools:

- The government wants the service providers to employ agencies for identification and removal of sexually violent content, particularly videos relating to child pornography and rape along with asking the intermediaries to share certain data with law enforcement agencies to identify the origin of such content.

Background:

- In October last year, the Supreme Court gave directions for removal of sexually violent content from the Internet and later, the ministry of home affairs was tasked with monitoring compliance on some agreed action points by both the government and the service providers.
- The ongoing proceedings in the matter started after the Supreme Court took suo motu note of a letter by an NGO on rampant circulation of sexual abuse videos.
- Government has compiled a keyword repository of over 500 English and Hindi words. These have

been shared with the intermediaries so that they can issue warning message for searching about sexually violent.

TOPIC: GS II, ASPECTS OF GOVERNANCE

2. WhatsApp to defend user privacy

Source: The Hindu

The government and WhatsApp is at loggerheads over tracing the origin of fake messages as it has stated not to comply with the government’s demand as the move will undermine the privacy of WhatsApp users.

Whatsapp’s argument:

- People rely on WhatsApp for all kinds of sensitive conversations, including with their doctors, banks and families and building traceability would undermine end-to-end encryption and the private nature of WhatsApp, creating potential for serious misuse. Thus it will not weaken the privacy protections.

Government’s stand:

- Given the increased instances of crime due to fake news circulated on various platforms, including WhatsApp, the government expects the company to continue to explore technical innovations whereby, in case of large-scale circulation of provocative and nefarious messages leading to violence and crime, the origin can be ascertained.
- WhatsApp needs to set up an Indian corporate entity subject to Indian laws in a defined time frame.

TOPIC: GS II, ELECTIONS

3. EC to response on petitions related to Fake News

Source: The Hindu

Why in news:

The Supreme Court has recently sought the response of the Election Commission of India on petitions highlighting lakhs of voters who have been found to be fake and that only a small portion of VVPAT (Voter Verifiable Paper Audit Trail) units have arrived so far in the run-up to the forthcoming Assembly elections in Madhya Pradesh and Rajasthan.

VVPATS

What are VVPAT machines?

- The Voter Verified Paper Audit Trail is a method that provides feedback to voters. It is an independent verification printer machine and is attached to electronic voting machines. It allows voters to verify if their vote has gone to the intended candidate.

How do VVPAT machines work?

When a voter presses a button in the EVM, a paper slip is printed through the VVPAT. The slip contains the poll symbol and name of the candidate. It allows the voter to verify his/her choice.

- After being visible to the voter from a glass case in the VVPAT for seven seconds, the ballot slip will be cut and dropped into the drop box in the VVPAT machine and a beep will be heard. VVPAT machines can be accessed by polling officers only.

What is the Election Commission’s stand on the issue?

- The EC has reiterated that EVMs cannot be tampered with and also thrown an open challenge, inviting computer experts and political leaders to prove that the machines can be hacked in the presence of the EVM manufacturers.

What does the Supreme Court say?

- The Supreme Court had earlier asked the Centre to comply with a 2013 Supreme Court directive to introduce paper trail in EVMs.
- In 2013, the SC had asked the Commission to introduce paper trails in EVMs in a phased manner for the 2014 Lok Sabha Elections.
- With an intent to have fullest transparency in the system and to restore the confidence of the voters, it is necessary to set up EVMs with VVPAT system because vote is nothing but an act of expression which has immense importance in democratic system.

TOPIC: GS II, ELECTION

4. Key issues related to election in the Era of Social Media

Source: The Hindu

Why in news:

- The Election Commission is deliberating over key issues like maintaining silence 48 hrs before the elections in the era of social media and other issues like limiting the expenditure and increasing participation of women.
- The law prohibits canvassing during the last 48 hours before polling. This is meant to create an environment of neutrality and “silence” for the voter to exercise the franchise through reasoned reflection rather than be swayed by last-minute appeals by parties and candidates.
- Election Commission has sought suggestions on how to address the issue of online canvassing to promote or prejudice the electoral prospects of a party/candidate on social media during the last 48 hours.

Growing in strength

Women’s representation increased from 4.4% in the first Lok Sabha elected in 1952 to 11.9% in the 16th Lok Sabha that came into being in 2014

- The global average as per the Inter-Parliamentary Union data of 2014 is 22.9%
- There were only 668 women out of 8,251 candidates in 2014. Only 29% of the women candidates were from national or State parties
- Number of women voters has increased from 55.82% in 2009 to 65.54% in 2014
- Sweden, Argentina, Nepal, Afghanistan, Bangladesh, Rwanda and Bolivia have

laws reserving seats for women in the legislature

- Argentina, Bangladesh, Bolivia, Mexico, France and Spain have laws providing for quotas for women in candidate lists of political parties



Adding print media:

- EC has asked the political parties if the print media should be brought within the ambit of Section 126(1)(b) (which lists mediums in which display of election matter is prohibited and includes television, cinematograph or similar apparatus) of the Representation of the People Act.
- The Commission has also asked political parties on whether there should be a ceiling on party election expenditure. The present election laws only provide a limit on a candidate’s expenditure, for which it has also written to the Law Ministry exploring this question.
- It has proposed that such ceiling should be either 50% or not more than the expenditure ceiling limit provided for the candidate multiplied by the number of candidates of the party contesting the election.
- In these elections, huge amounts of unaccounted-for money is often spent by the candidates.

Strategies for migrants and absentee voters and women

- EC has asked the parties to take note of alternative modes of voting for domestic migrants and absentee voters, such as postal, proxy and e-voting for which it has proposed five strategies to ensure that no migrant worker is left out.
- These include developing portability of voting rights by linking voter ID and Aadhaar. A one-time voluntary registration system for domestic migrants, electoral support services to be provided to migrants at the source and destination areas, raising awareness of voters’ rights and a helpline for domestic migrants are the other measures suggested by the Commission.
- The Election Commission has asked about the measures that can political parties undertake to encourage enhanced representation of women within the organisation structure of the political party. There are only 11.4% women in the 16th

Lok Sabha, substantially lower than the global average of 22.9%.

- It has said that at least seven countries have laws reserving seats for women in legislature, including Nepal.

TOPIC: GS II, GOVERNMENT POLICIES AND INTERVENTION

5. Clean India Mission

Source: The Hindu

Why in news:

- The research team, based at the Centre for Economic and Social Studies, Hyderabad, completed field work studying Madhya Pradesh, Odisha and Andhra Pradesh evaluates one of India's most substantial policy commitments, the National Rural Health Mission (NRHM), to arrive at telling and cautionary conclusions.
- The NRHM identifies 18 States as having weak public health indicators and health infrastructure based on major determinants like nutrition, water, and sanitation.

Details of the survey:

- Open Defecation-Free (ODF) villages, functioning local bodies and their interactions with Panchayati Raj institutions (PRIs) are better than they are in non-ODF villages.
- Availability of protected water and sanitation may significantly impact household morbidity and the incidence of epidemics at the community level.

Class issues:

- Clear class divisions emerge across all villages, with poorer residents often unaware of the dangers of not washing fruit or vegetables before cooking or eating them
- The poorest have to use sand or ash to clean their hands after defecation, as they have almost no easy access to clean water.

TOPIC: GS II, STRUCTURES OF STATE LEGISLATURE AND THEIR POWER

6. Legislative Council and issues related to it

Source: The Hindu

Why in news:

Odisha is all set to get a 49 member Legislative Council and it plans to call for a national policy on the utility of a second chamber (the Legislative Council) in the States.

Legislative Councils:

- The legislative council is permanent body but 1/3rd of its member retire every 2 years. The members of the council elect a chairman which is

called "presiding officer". The council also elects the Deputy Chairman.

- Total Number of the Legislative Council should not exceed the 1/3rd of the total number of members of the Legislative assembly, but it should not be less than 40 (Article 171).
- Jammu & Kashmir is an exception to this where the upper house has strength of 36 only. This is because; J & K assembly is created as per the J & K constitution and Part VI is not applicable to Jammu & Kashmir.

Legislative councils in the states:

- There are only seven such Councils across the country in the states of Andhra Pradesh, Bihar, Jammu and Kashmir, Karnataka, Maharashtra, Telangana, and Uttar Pradesh.
- Section 168 of the Indian constitution speaks about the Constitution of Legislatures in States and Article 169 speaks about "Abolition or creation of Legislative Councils in states".
- Indian Constitution does not adhere to the principle of bicameralism in case of every legislature. Whether there should be a legislative council in the state or not, is decided by legislative assembly of the state itself.
- But it does not mean that legislative assembly can itself create a legislative council. The constitution of India has full provisions about the creation of legislative council and its abolishment.
- The power of abolition and creation of the State legislative council is vested in Parliament of India as per article 169. But, to create or to abolish a state legislative council, the state legislative assembly must pass a resolution, which must be supported by majority of the strength of the house and 2/3rd majority of the present and voting (Absolute + Special Majority).
- The resolution to create and abolish a state legislative council is to be assented by the President also.
- Though when a legislative council is created or abolished, the Constitution of India is also changed, it is not considered as a Constitution Amendment Bill.

Relevance of Legislative Council:

- The framers of the constitution as well as members of the Constituent assembly had in mind that it may not be possible for all the states to support two houses, financially as well as for other reasons.
- Some of the members of the Constituent assembly criticized the idea of bicameral legislature in the

states as a superfluous idea and a body which is unrepresentative of the population, a burden on the state budget and causing delays in passing legislation. Hence, it was left for the legislatures of the state assembly to decide whether or not there should be a legislative council in the state.

Arguments in favour of Legislative Councils in the state:

- An Upper House provides a forum for academicians and intellectuals, who are arguably not suited for the rough and tumble of electoral politics.
- It provides a mechanism for a more sober and considered appraisal of legislation that a State may pass.
- Legislative Councils make the governments more accountable.
- The members of Legislative Council through their experience can act as the friend, philosopher and guide of the Legislative Assembly.

Arguments against Legislative Councils in state:

- The absence of Legislative council in every state itself suggests the lack of any real advantage, apart from the absence of a broad political consensus on the issue.
- The process of creating an Upper House is lengthy. Two Bills introduced in the Rajya Sabha in 2013 for establishing Legislative Councils in Assam and Rajasthan are still pending, indicating the lack of support for such a move.
- Rather than fulfilling the lofty objective of getting intellectuals into the legislature, the forum is likely to be used to accommodate party functionaries who fail to get elected.
- It is also an unnecessary drain on the exchequer.
- Another issue is that graduates are no longer a rare breed; also, with dipping educational standards, a graduate degree is no guarantee of any real intellectual heft.

Way Forward:

- There has to be a national policy on having an Upper House in State legislatures to be framed by the Union government, so that a subsequent government doesn't abolish it. There has to be a uniformity and strong policy for its creation, revival and abolishment.
- The provision in the law for Councils to have seats for graduates and teachers needs to be reviewed.
- A national consensus must be evolved on the establishment of Legislative Councils.

TOPIC: GS II, BASIC STRUCTURE OF THE CONSTITUTION

7. Article 35A and the basic structure

Source: The Hindu

Why in news:

The Supreme Court is hearing on the validity of Article 35A of the Constitution.

Article 35 A

- Article 35A lets the J&K Legislature decide the "permanent residents" of the State, prohibits a non-J&K resident from buying property in the State and ensures job reservation for its residents.
- The provision mandates that no act of the legislature coming under it can be challenged for violating the Constitution or any other law of the land.

How did it come into existence?

- Article 35A was incorporated into the Constitution in 1954 by the order of the then President on the advice of the central Cabinet. It followed the 1952 Delhi Agreement between Nehru and the then Prime Minister of Jammu and Kashmir Sheikh Abdullah, which extended Indian citizenship to the 'State subjects' of Jammu and Kashmir.
- This order was issued under Article 370 (1) (d) of the Constitution. This provision allows the President to make certain "exceptions and modifications" to the Constitution for the benefit of 'State subjects' of Jammu and Kashmir. Therefore, Article 35A was added to the Constitution as a testimony of the special consideration the Indian government accorded to the 'permanent residents' of Jammu and Kashmir.
- The parliamentary route of law making was bypassed when the President incorporated Article 35A into the Constitution.
- Article 368 (i) of the Constitution empowers only the Parliament to amend the Constitution.
- The Supreme Court in its March 1961, in Purnanlal Lakhnupal vs. The President of India discusses the President's powers under Article 370 to 'modify' the Constitution. Though the court observes that the President may modify an existing provision in the Constitution under Article 370, the judgment is silent as to whether the President can, without the Parliament's knowledge, introduce a new Article. This question remains open.

Issue:

- A writ petition challenged the validity of both Article 35A and Article 370. It argues that four representatives from Kashmir were part of the Constituent Assembly involved in the drafting of

the Constitution and the State of Jammu and Kashmir was never accorded any special status in the Constitution.

- Article 370 was only a ‘temporary provision’ to help bring normality in Jammu and Kashmir and strengthen democracy in that State. The Constitution-makers did not intend Article 370 to be a tool to bring permanent amendments, like Article 35A, in the Constitution.
- Article 35 A is against the “very spirit of oneness of India” as it creates a “class within a class of Indian citizens”. Restricting citizens from other States from getting employment or buying property within Jammu and Kashmir is a violation of fundamental rights under Articles 14, 19 and 21 of the Constitution.
- Another petition has challenged Article 35A for protecting certain provisions of the Jammu and Kashmir Constitution, which restrict the basic right to property if a native woman marries a man not holding a permanent resident certificate. “Her children are denied a permanent resident certificate, thereby considering them illegitimate.
- The National Conference argues that if article 35A is struck down, with it all other presidential orders passed since the 1950s will also become redundant and reopen the debate around the issue of accession.
- Article 35A did not follow the procedure prescribed under Article 368 thus infringes the Constitution’s basic structure. However the argument that Article 35A infringes the Constitution’s basic structure suffers from a fundamental flaw.
- In Kesavananda Bharati v. State of Kerala 1973 , the statement that the Constitution’s basic features cannot be abrogated, was based expressly on an interpretation of the text of Article 368. Its logic doesn’t extend automatically to amendments made under Article 370, a provision, which in and of itself, is essential to maintaining India’s federal structure. Thus, an amendment made prior to the decision in Kesavananda Bharti case cannot be susceptible to a basic structure challenge.

TOPIC: GS II, ASPECTS OF GOVERNANCE

8. Regulation of Drones

Source: PIB

Why in news:

- Recently the Ministry of Civil Aviation announced that Drones, their operators and pilots will have to be mandatorily registered on aviation regulator DGCA’s online portal from December 1.

- The use of remotely piloted aircraft, a kind of drone which is allowed for taking photographs, conducting surveys such as for laying of pipelines and agricultural purposes and surveillance will be as per the regulations on remotely piloted aircraft system.

Regulatory Rules:

- The rules bar use of drones for delivery of items. However, they can be deployed for spraying of pesticides and delivery of relief material during a natural disaster only on a case-by-case basis.
- Remotely piloted aircraft (RPA) have been divided into five categories – nano (less than 250gm), micro (between 250 gm and 2kg), small (between 2 and 25 kg) and large (more than 150 kg).
- Users will have to go online to seek a unique identification number for each drone as well as an operator’s permit licence and provide details of flight path to be undertaken for every flight. However, nano drones are exempt from all these pre-requisites.
- Wedding photographers are allowed to use the drones in daylight and within the visual range of 450 m and use micro drones during night, if they are taking pictures in an enclosed premises which is also well-lit.
- Drones are barred from being flown near airports, international border, coastline, Parliament, Secretariat complex in State capitals, military installations and eco sensitive zones.
- Small and large drones can fly up to a maximum height of 400 feet. Nano drones must not fly beyond 50 feet and micro drones must be within 200 feet from ground level.
- The DGCA will also be connected to district police officers and will inform them about drone flights cleared by it. Drone users are also advised to keep the local police informed of flights planned by them.

TOPIC: GS II, GOVERNMENT POLICIES AND INTERVENTION

9. Miserable condition of Child Shelters

Source: The Hindu

Why in news:

- The Supreme Court recently called the preliminary contents of a social audit conducted by the National Commission for the Protection of Child Rights (NCPCR) as frightening.
- Out of a total of 2,874 children’s homes surveyed, only 54 institutions could be given positive reviews.

- The NCPCR is carrying out an audit of child care institutions and other bodies such as children homes, open shelters, observation homes, special homes, places of safety, specialised adoption agencies and fit facilities under the Juvenile Justice (Care and Protection of Children) Act, 2015, and Model Rules.
- The audit is being conducted in compliance with a Supreme Court order on May 5, 2017.

Details of findings:

- Out of 185 shelter homes audited across the country, only 19 had all the records of a child that they are supposed to maintain.
- Of the 203 special adoption agencies, only eight got positive reviews.
- Only 16% of the 172 observation homes audited till July 31, 2018, had all the required records of the children, like case histories and who are residing there.
- The commission urged the court to direct the States to take positive measures to improve the condition of Child care institutions.
- The court said that, had the authorities functioned properly, recent incidents like the one in Muzaffarpur in Bihar where several girls were allegedly raped and sexually abused in a shelter home would not have happened.

The National Commission for Protection of Child Rights (NCPCR)

- The National Commission for Protection of Child Rights (NCPCR) was set up in March 2007 under the Commissions for Protection of Child Rights (CPCR) Act, 2005, an Act of Parliament (December 2005).
- National Commission for Protection of Child Rights (NCPCR) is a statutory body under the Commissions for Protection of Child Rights (CPCR) Act, 2005 under the administrative control of the Ministry of Women & Child Development, Government of India.
- The Commission's Mandate is to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in consonance with the Child Rights perspective as enshrined in the Constitution of India and also the UN Convention on the Rights of the Child.
- The Child is defined as a person in the 0 to 18 years age group.

TOPIC: GS II, ASPECTS OF GOVERNANCE

10. Bills to curb sacrilege passed in Punjab Legislature

Source: The Hindu

Why in news:

- The Punjab assembly has unanimously passed bills for an amendment to the Indian Penal Code and the Code of Criminal Procedure to make desecration of all religious texts punishable with life imprisonment. The IPC (Punjab Amendment) Bill, 2018, has been inserted in Section 295AA to provide that “whoever causes injury, damage or sacrilege to Sri Guru Granth Sahib, Srimad Bhagavad Gita, the Holy Quran and the Holy Bible with the intention to hurt the religious feelings of the people shall be punished with imprisonment for life.”
- It came in the wake of past communal disturbances which were created due to desecration of Guru Granth Sahib in Punjab in 2015.
- The other Bill — ‘Code of Criminal Procedure (Punjab Amendment) Bill, 2018,’ provides to insert section 295AA — “injuring, causing any damage or sacrilege to Sri Guru Granth Sahib, Srimad Bhagwad Gita, Holy Quran and Holy Bible with an intention to hurt the religious feeling of the people.”
- The amendments would need the assent of the President. Under the existing Section 295A, punishment is for a maximum of three years’ imprisonment with or without fine.
- The Assembly also passed the Punjab Police (second amendment) Bill, 2018, which provides that the State government shall select the Director General of Police from amongst the Indian Police Service (IPS) from a panel of at least three eligible officers borne on the cadre of Punjab or any state cadre, who are in the rank of Director General or are eligible to hold this rank for appointment as DGP, based on their service record and range of experience, having a reasonable period of remainder service left, which shall in no case be less than twelve months as on the date of appointment.”

Sacrilege:

- Sacrilege is the violation or injurious treatment of a sacred object or person. This can take the form of irreverence to sacred persons, places, and things.
- When the sacrilegious offence is verbal, it is called blasphemy, and when physical, it is often called desecration.

- In a less proper sense, any transgression against what is seen as the virtue of religion would be a sacrilege, and so is coming near a sacred place without permission.

TOPIC: GS II, ASPECTS OF GOVERNANCE

11. Civil Society in India

Source: The Hindu

Why in news:

Recently several civil rights activists were arrested in the wake of violence in Bhima Koregaon issue. The reason for their arrest was that their speeches at the Elgar Parishad meeting in Pune in December 2017 which incited the violence unleashed on a Dalit gathering at Bhima-Koregaon on January 1, 2018.

What is civil Society?

- It is a community of citizens linked by common interests and collective activity is a civil society. It is the aggregate of non-governmental organizations and institutions that manifest interests and will of citizens.
- It is referred to as the third sector of the society distinct from government and business.

What is the need for civil society?

- The modern democratic state with the technologies of surveillance and control possesses such power that has never been seen in the history. Yet, there are citizens that are vulnerable and helpless despite the rights they possess in case the democratic state decides to terrorise, kill and drill fear in them.
- The market in present times lacks moral sense. It is supremely indifferent to human suffering. It has neither sympathy nor room for citizens exploited by the state, and by its own need for resources, labour, and profit.
- Such a scenario calls for the intervention of civil society to protect the interest of the citizens as it is the only sphere that stands between the individual and the state.
- Their role is crucial for democracy because today we are ruled by a government that openly defies ethics and morality, that casts itself in the mould of realism, and that is supremely indifferent to the plight of millions of its citizens.
- We are ruled by leaders who dismiss the need for civil society because the cadres and the front organisations of its ideological backbone seek to dominate the space between the individual, the market and the state.

- Associations have the capacity to challenge the violent power of the state through petitions, protests, dharnas and ultimately judicial activism.
- When the political parties are unresponsive, citizens can access centres of power and privilege only through a vibrant civil society.

Background:

- Every political revolution in the world has begun with the rights to life and liberty, be it the French Revolution or the Glorious Revolution, among the others. These two rights lie at the core of other rights that have been developed and codified as critical for human beings.
- The two rights stretch from the right not to be tortured or killed, to the right not to be arrested and imprisoned by the state without due cause. The right to life is a basic right, but our lives do not mean anything if we are imprisoned for no reason.
- The civil liberties movement made an appearance on to the scene of Indian politics at the aftermath of Emergency (1975-77) as some Indian citizens were randomly and arbitrarily imprisoned and the fundamental rights of others were curtailed.
- The movement took a significant task of protecting the fundamental right to life and liberty granted by the Indian Constitution.

What has been the role of Civil Society in India?

- They have become the custodian of the Fundamental Rights chapter of the Indian Constitution. They have investigated cases of arbitrary imprisonment, custodial deaths, deadly encounters and coercion of any citizen who dares to speak up against the state or dominant groups.
- These organisations have carefully documented the causes and the triggers of communal and caste violence, and established an excellent archive on the abuse of power by governments.
- They have protected the rights of vulnerable sections of our own people, the Adivasis, the Dalits and Muslims. They have shouldered the fight for the rights of the oppressed.

Criticisms:

- Not all civil society groups are involved in protecting the moral conscience of our society. Some are in the sole business of getting funds from the state or others.
- Some sections of media are often covered down by their corporate bosses, and the temptation of fame.
- Few sections are involved in excessive protests, eventually hampering national interests.

- Too often, even progressive global civil society organisations do not meet the standards of accountability and transparency that they demand of others.
- Unhappily, the majority of Indians keep quiet when their own fellow citizens are tortured by the police, stripped of access to resources and livelihoods, lynched, exploited by corporate India, and neglected by the mainstream media.

II. SOCIAL JUSTICE

TOPIC: GS I, SOCIAL ISSUES

12. SC on adverse impact of Female Genital Mutilation

Source: The Hindu

Why in news:

Recently the Supreme Court said that the Constitution does not allow a person to cause injury to another.

Constitutionality of the act:

- SC stated that the court has to test it in the light of constitutional morality. Just because something is essential does not mean it is above constitutional morality. SC very clearly said that If things do not go by the Constitution, then morality is left to the mob. The people on the streets will say what is moral and what is immoral.
- It has been argued that the practice cannot be considered essential in religion and it can be brought under the ambit of the POCSO Act.

TOPIC: GS II, SOCIAL ISSUES

13. Leprosy and related stigma

Source: The Hindu

What is the issue?

Social stigma attached to leprosy patients still remains even after the discovery of complete cure for the disease.

Leprosy:

- Leprosy is a long-term infection by the Mycobacterium leprae or Mycobacterium lepromatosis.
- Initially, infections are without symptoms and typically remain this way for 5 to 20 years.
- Symptoms that develop include granulomas of the nerves, respiratory tract, skin, and eyes.
- This may result in a lack of ability to feel pain, which can lead to the loss of parts of extremities due to repeated injuries or infection due to unnoticed wounds. Weakness and poor eyesight may also be present.

Status of Leprosy:

- Leprosy is one of the World's oldest diseases with India accounting to 60% of the annual new cases.
- In 2005, it was officially declared eliminated as a public health concern in India. This was when the new cases fell to less than 1 per 10,000. Yet India accounts for the largest number of leprosy affected people in the world.

Leprosy and Indian Society:

- Problems like lack of awareness, social stigma, myths and socio-cultural problems related to this disease in the society still prevail.
- The colonial laws that predate leprosy eradication programmes and medical advancements still remain on the statute book. These were highly discriminatory from the beginning, but even in independent India, where the law has been an instrument for social change, the process of removing them has been slow.
- The Lepers Act of 1898 was repealed two years ago but stigma and discrimination against the leprosy-affected has not gone.

What actions have been taken so far?

The introduction of a Bill in Parliament to remove leprosy as a ground for seeking divorce or legal separation from one's spouse.

- The Supreme Court has asked the Centre to bring in a positive law conferring rights and benefits on persons with leprosy and to repeal all acts and rules that perpetuated the stigma associated with it. It has been hearing a writ petition by the Vidhi Centre for Legal Policy seeking to uphold the fundamental rights of people with leprosy and the repeal of discriminatory laws against them.
- The 256th Report of the Law Commission:
 1. The report came up with a number of suggestions, including the repeal of discriminatory legal provisions.
 2. It listed for abolition personal laws and acts on beggary.
 3. It cited the UN General Assembly resolution of 2010 on the elimination of discrimination against persons with leprosy.
 4. It sought the abolition of laws, rules, regulations, customs and practices that amounted to discrimination, and wanted countries to promote the understanding that leprosy is not easily communicable and is curable.

Way forward:

- It is time for concerted action to end the established discrimination in law and society against those afflicted by it.
- The Personal Laws (Amendment) Bill, 2018, is only a small step. An affirmative action law that recognises the rights of those affected and promotes their social inclusion will serve a larger purpose.
- The culture of exclusion that most of them face has to be ended.
- Misconceptions about the disease need to be removed and the belief that physical segregation of patients is necessary has to be dispelled.
- The campaign to end discrimination against those afflicted, and combating the stigma associated with it, is decades old. While governments may have to handle the legislative part, society has an even larger role to play. It is possible to end discrimination by law, but stigma requires more than legal efforts to eliminate.

TOPIC: GS II, SOCIAL ISSUES

14. Constitution and Women

Source: The Hindu

Why in news:

The arguments with respect to the Sabarimala case in the Supreme Court case have triggered interesting thoughts on the Constitutional Interpretation. The argument that prohibition of entry of women into the temple is violation of Article 17 was resisted on the contention that the prohibition of untouchability was historically intended only to protect the interests of the backward classes. The claim is that the makers of the Constitution never envisioned including women within the ambit of untouchability.

Sabarimala Case:

- ‘Sabarimala’ is a test case for freedom of religion, women’s rights and also constitutional interpretation
- It raises issues about religious freedom, gender equality and the right of women to worship.
- The petitioners have argued that discrimination based on biological reasons is not permissible going by the constitutional scheme. They maintain that due to the current exclusion, the right of women to worship the deity is violated.
- It was also argued that the exclusion is a form of ‘untouchability’ – which is against Article 17, since the exclusion is solely based on notions of purity and impurity.

- The Temple Board is in support of the ban have cited it as an age-old custom. It forms a part of ‘essential religious practice’ of worshippers under Article 25 of the Constitution. It was also urged that matters such as who can or cannot enter the temple are covered under the rights to administer and manage religious institutions, under Article 26.

Analysis of untouchability law:

- Certain observations about the abolition clause are important.
- Article 17 is emphatic in its wording: “Untouchability is abolished and its practice in any form is forbidden. The enforcement of any disability arising out of untouchability shall be an offence punishable in accordance with law.”
- It is peculiar since it abolishes a social practice in any form. All the other provisions in the same chapter lay down substantive fundamental rights.
- In spite of the specific equality and anti-discrimination guarantees in the Constitution, Article 17 is inserted to specifically acknowledge and remove the social stigma associated with certain castes. It was enacted in an attempt to eradicate historical inequality.

Two approaches to read the constitution:

The arguments in support as well as against the temple entry reflect the two approaches to read the Constitution:

1. The original intent approach: Based on the intent of the framers of the Constitution when they drafted the text.

For example, an originalist will adopt a certain understanding of a constitutional right — say, the right to same-sex relationships under the right to liberty promised under Article 21 only if she is convinced that the drafters intended that. She may argue that the framers never thought of such a situation and, therefore, a same-sex couple cannot have a constitutional right under Article 21. In fact, a similar argument has been made in the debates in India on homosexuality. Article 15 urges the state from discriminating on grounds such as religion, caste and sex. By relying on the originalist approach, it was asserted that the makers of the Constitution meant the word ‘sex’ under Article 15 only in the binary sense of ‘male and female’.

2. The Living Tree Doctrine: It involves understanding the Constitution to be an evolving and organic instrument. For the living tree theorists, it matters little what the intentions were at the time of Constitution making. What matters the most is how the Constitution can be interpreted to contain rights in their broadest realm.

- The original intent approach as a method of constitutional interpretation has been subject to serious criticism for being too rigid and inflexible. The Canadian Supreme Court, while rejecting originalism, said that such a method would mean that the rights, freedoms and values embodied in the Charter in effect become frozen in time to the moment of adoption with little or no possibility of growth, development and adjustment to changing societal needs. The Living Tree Doctrine is prominent in Canadian jurisprudence.
- The clauses of the constitution must be understood in the way their language most naturally suggests: they refer to abstract moral principles and incorporate these by reference as limits on government's power."

Following the living tree approach:

- The 'living tree' approach provides a finer reading of the Constitution and supports a broader interpretation of Article 17.
- Even if the framers of the Constitution intended this provision to address a specific category of discrimination, the constitutional court must adopt an interpretation to include women under Article 17.
- Women have been kept out of Sabarimala because of menstruation. As a distinct class, they are being discriminated against. If certain castes are considered 'impure' because of their social status, menstruating women are considered to be so because of their gender.
- The criteria are different but the effect of exclusion is common. It seems that such an interpretation does not violate the language and content of Article 17, but only liberates it.
- Sabarimala case is a test case not only for freedom of religion and women's rights but also for constitutional interpretation. It presents to the court an exemplary opportunity for an alternative reading of the Constitution. If the court indeed reads Article 17 to have a wider meaning, it will signal a new era of transformative constitutionalism in Indian jurisprudence.

TOPIC: GS II, SOCIAL ISSUES

15. Social media sites to be held responsible for lynching

Source: The Hindu

Why in news:

- A panel headed by Union Home Secretary which deliberated on measures to check incidents of lynching, submitted its report after consulting

cross section of people, to a Group of Ministers headed by the Home Minister in the wake of more than 20 people who were lynched based on fake posts or rumours floating on various social media platforms in May and June.

- The GoM will now submit its recommendations to Prime Minister for a final decision.
- The panel has concluded that social media platforms needed to act in a time-bound manner.

Points of concern
The expert panel deliberated on measures to curb incidents of mob lynchings

Social media: The expert panel concurred on the need to make social media platforms, such as Facebook, WhatsApp and YouTube, accountable for not blocking malicious posts

Penalty: The panel suggested that an FIR could be launched against top officials of such platforms for not complying with government orders

Course of action: Social media platforms have reportedly agreed to improve their compliance rates following the Centre's call for doing so

In May-June, more than 20 people were lynched based on fake posts or rumours floating on various social media platforms

Action against the social media:

- It is said that social media platforms — Facebook, WhatsApp, YouTube and Twitter — would be made accountable for not blocking malicious posts and videos when brought to their notice and an "FIR could be lodged against their country heads" for not complying with government orders and they could be prosecuted under law.

Provisions to curb objectionable contents:

- There is a provision in law which enables the government to issue orders to remove objectionable content, block websites, etc. Law enforcement agencies should be able to step up the act and monitor more proactively.
- Compliance should be timely. Some countries employ non-governmental organisations and volunteers who proactively surf the Internet.
- A portal has been created where people can report such videos and content and that can be forwarded by the National Crime Records Bureau to the States concerned for appropriate action.
- Home Ministry has recently issued advisories to the State governments and authorities of the Union Territories after the Supreme Court issued directives to check incidents of lynching in the country.
- The Centre has directed to appoint an officer in each district at the level of Superintendent of Police and to set up a special task force to gather

intelligence, and closely monitor social media contents to prevent mob attacks on people on the suspicion of being child-lifters or cattle smugglers.

Lynching:

- Lynching is a form of violence in which a mob, under the pretext of administering justice without trial, execute a presumed offender, often after inflicting torture and corporal mutilation.
- The term lynch law refers to a self-constituted court that imposes sentence on a person without due process of law.

III. ECONOMY

TOPIC: GS III, IMPORTANT ASPECTS OF GOVERNANCE, TRANSPARENCY AND ACCOUNTABILITY, E-GOVERNANCE- APPLICATIONS

16. Department of Commerce Developing National Logistics Portal

Source: PIB

What's the news?

A National Logistics Portal is being developed by the Ministry of Commerce and Industry to ensure ease of trading in the international and domestic markets.

About the portal:

- The portal will link all the stakeholders of EXIM, domestic trade and movement and all trade activities on a single platform.
- The portal will be implemented in phases.
- It will fulfil the commitment of the Government of India to enhance trade competitiveness, create jobs, boost India's performance in global rankings and pave the way for India to become a logistics hub.

Background:

- In this year's budget speech, Finance Minister had announced that the Department of Commerce will create a portal which will be a single window online market place for trade and will connect business, create opportunities and bring together various ministries, departments and the private sector. Stakeholders like traders, manufacturers, logistics service providers, infrastructure providers, financial services, Government departments and groups and associations will all be on one platform.

About India's Logistic Sector:

- India's logistics sector is highly defragmented and the aim is to reduce the logistics cost from the present 14% of GDP to less than 10% by 2022.

- India's logistics sector is very complex with more than 20 government agencies, 40 partnering government agencies (PGAs), 37 export promotion councils, 500 certifications, 10000 commodities, 160 billion market size.
- It also involves 12 million employment base, 200 shipping agencies, 36 logistic services, 129 ICDs, 168 CFSs, 50 IT ecosystems and banks & insurance agencies. Further, 81 authorities and 500 certificates are required for EXIM.

Significance of Indian logistic sector:

- As per the Economic Survey 2017-18, the Indian logistics sector provides livelihood to more than 22 million people and improving the sector will facilitate 10 % decrease in indirect logistics cost leading to the growth of 5 to 8% in exports. Further, the Survey estimates that the worth of Indian logistics market would be around USD 215 billion in next two years compared to about USD 160 billion currently.

TOPIC: GS III, INFRASTRUCTURE- WATERWAYS

17. O-SMART Scheme

Source: PIB

Why in news:

The Cabinet Committee on Economic Affairs has given its approval for the umbrella scheme "Ocean Services, Technology, Observations, Resources Modelling and Science (O-SMART)", for implementation during the period from 2017-18 to 2019-20 at an overall cost of Rs.1623 crore.

About the scheme:

Recognizing the importance of implementing schemes of highly multi-disciplinary in the ocean sector of national interests and international commitments, the Ministry of Earth Sciences is proposing to continue the existing schemes in a focused way as a part of umbrella scheme of (O-SMART).

- The scheme encompasses a total of 16 sub-projects addressing ocean development activities such as Services, Technology, Resources, Observations and Science.
- The important deliverables during the next 2 years envisage include (i) strengthening of Ocean Observations and Modelling (ii) Strengthening of Ocean Services for Fishermen (iii) setting up Marine Coastal Observatories for monitoring marine pollution in 2018 (iv) setting up Ocean Thermal Energy Conversion Plant (OTEC) in Kavaratti (v) acquisition of 2 Coastal Research Vessels for Coastal research (vi) Continuation of Ocean Survey and Exploration of Minerals and

Living Resources (vii) Technology Development for Deep Ocean Mining- Deep Mining System and Manned Submersibles and (ix) setting up Six Desalination Plants in Lakshadweep

Impact of the scheme:

- The services rendered under the O-SMART will provide economic benefits to a number of user communities in the coastal and ocean sectors, namely, fisheries, offshore industry, coastal states, Defence, Shipping, Ports etc.
- Currently, five lakhs fishermen community are receiving the related information daily through mobile which includes allocation of fish potential and local weather conditions in the coastal waters. The scheme will help in reducing the search time for fishermen resulting savings in the fuel cost.
- Implementation of O-SMART will help in addressing issues relating to Sustainable Development Goal-14, which aims to conserve use of oceans, marine resources for sustainable development.
- This scheme (O-SMART) also provides necessary scientific and technological background required for implementation of various aspects of Blue Economy.
- The State of Art Early Warning Systems established under the O-SMART Scheme will help in effectively dealing with ocean disasters like Tsunami, storm surges.
- The technologies being developed under this Scheme will help in harnessing the vast ocean resources of both living and non-living resources from the seas around India.
- The ocean advisory services and technologies being rendered and developed under the scheme play a pivotal role in the development activities over dozen sectors, working in the marine environment including the coastal states of India, contributing significantly to the GDP.

Significance of the Blue Economy:

- As the resources on land are not adequate enough to meet the future demands, India is also embarking on blue economy for effective and efficient use of the vast ocean resources in a sustainable way, which would require a great deal of information on ocean science, development of technology and providing services.
- Further, the coastal research and marine biodiversity activities are important to be continued also in the context of achieving United Nations Sustainable Development Goal-14 to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

IV. ENVIRONMENT

TOPIC: GS III, CLIMATE CHANGE AND CONSERVATION RELATED ISSUES

18. Close watch on Climate Change

Source: The Hindu

Why the news:

The Ministry of Earth Sciences (MoES) is considering a Rs. 79-crore proposal to study the impact of climate change on Kerala.

- The project has been proposed by the National Institute of Science Communication and Information Resources (NISCAIR) under the Council of Scientific Industrial Research (CSIR).

Studying climate change

- Nodal institute to develop climate change adaptation programmes for islands and coastal ecosystems
- To assess the dynamics of riverine discharge and saline water incursion
- To demarcate vulnerable regions; develop a framework and decision support tool to assess climate change impact on livelihood and developmental processes
- Over 100 scientists from nearly 28 research agencies and institutes to be part of the initiative

Highlights of the project:

- Objectives: The objective of the project is to develop a framework and decision support tool to assess the climate change impact on livelihood and developmental processes. The Kerala project will analyse the trends in climatic elements, their spatial pattern and its relationship with extreme events such as El Nino, cyclones etc.
- The project involves experts from various scientific institutions across the country. It consists of 25 work packages and covers all the aspects of climate change adaptations for Kerala.
- The ambitious project, spread over a period of three years, will assess the impact of climate change on agriculture (including plantation crops and spices); fisheries (marine and inland); industries; health; transport — vehicular and inland water transports; tourism; biodiversity; forestry; and landslips.
- The experts will study the spatial and temporal changes in water resources (surface and groundwater — quantity and quality). Researchers will also assess the monsoonal variations and its impact, besides looking at the climate change scenario on the islets of Kerala.

- The study will look into suitable sectoral mitigation options under changing climate scenarios and assess the carbon sequestration potential of Kerala.

Significance:

- It assumes significance in the wake of devastating floods that ravaged many parts of Kerala as the research initiative will specifically assess the dynamics of riverine discharge and saline water incursion under the climate change scenario.

CSIR-NISCAIR was the nodal institute to develop climate change adaptation programmes for islands and coastal ecosystems as part of the 12th Five Year Plan programme approved by the CSIR.

TOPIC: GS III, CONSERVATION, ENVIRONMENTAL POLLUTION AND DEGRADATION

19. Revival of Cheetah Reintroduction Project

Source: The Hindu

Why in news:

The Madhya Pradesh forest department has written to the National Tiger Conservation Authority to revive the plan to reintroduce cheetahs in the State's Nauradehi sanctuary. The ambitious project, conceived in 2009, had hit a roadblock for want of funds.

About Cheetah:

- IUCN Status: Vulnerable
- Scientific name: *Acinonyx jubatus*
- Cheetah is one of the oldest of the big cat species, with ancestors that can be traced back more than five million years to the Miocene era.
- The cheetah is also the world's fastest land mammal. With great speed and dexterity, the cheetah is known for being an excellent hunter, its kills feeding many other animals in its ecosystem—ensuring that multiple species survive.
- India's last spotted feline died in Chhattisgarh in 1947. Later, the cheetah was declared extinct in India in 1952.

Cheetah reintroduction programme in India:

- The Wildlife Institute of India at Dehradun had prepared a ₹260-crore cheetah re-introduction project six years ago. It was estimated that an amount of ₹25 crore to ₹30 crore would be needed to build an enclosure in an area of 150 sq km for the cheetahs in Nauradehi. The proposal was to put the felines in the enclosure with huge boundary walls before being released in the wild.

- Nauradehi was found to be the most suitable area for the cheetahs as its forests are not very dense to restrict the fast movement of the spotted cat. Besides, the prey base for cheetahs is also in abundance at the sanctuary.
- According to the earlier action plan, around 20 cheetahs were to be translocated to Nauradehi from Namibia in Africa. The Namibia Cheetah Conservation Fund had then showed its willingness to donate the felines to India. However, the State was not ready to finance the plan contending that it was the Centre's project.

Reasons for extinction:

- The reasons for extinction can all be traced to man's interference. Problems like human-wildlife conflict, loss of habitat and loss of prey, and illegal trafficking, have decimated their numbers. The advent of climate change and growing human populations have only made these problems worse. With less available land for wildlife, species that require vast home range like the cheetah are placed in competition with other animals and humans, all fighting over less space.

Significance of reintroduction:

- Reintroducing cheetahs in India will help relieve pressure on the species by creating additional habitat, which the cheetah desperately needs to survive.
- The reintroduction of cheetahs will help restore India's open forests and grassland ecosystems, which have been suffering.
- Having cheetahs will result in greater biodiversity, and biodiversity is the hallmark of healthy ecosystems.
- India is also home to the world's largest free-roaming populations of livestock. Bringing back the cheetah will focus attention on pastoralism, and in doing so, help restore India's natural heritage.

National Tiger Conservation Authority (NTCA):

- The National Tiger Conservation Authority is a statutory body under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it under the said Act.
- The NTCA has been fulfilling its mandate within the ambit of the Wildlife (Protection) Act, 1972 for strengthening tiger conservation in the country by retaining an oversight through advisories/normative guidelines, based on

appraisal of tiger status, ongoing conservation initiatives and recommendations of specially constituted Committees.

TOPIC: GS III, CONSERVATION

20. Thematic Reports on Sustainable Development in Indian Himalayan Region

Source: PIB

Why in news:

NITI Aayog has released five Thematic Reports on Sustainable Development in Indian Himalayan Region (IHR) recognizing uniqueness of Himalayas and challenges for sustainable development. These reports list challenges in all defined five thematic areas and discuss significance, challenges, ongoing actions and future roadmap.

Background:

- Recognizing the uniqueness of the Himalayas and the challenges for sustainable development, NITI Aayog had set up 5 Working Groups (WGs) in June 2017 to prepare a roadmap for actions in 5 thematic areas.

The themes include:

- Inventory and Revival of Springs in Himalayas for Water Security.
- Sustainable Tourism in Indian Himalayan Region.
- Transformative Approach to Shifting Cultivation.
- Strengthening Skill & Entrepreneurship Landscape in Himalayas.
- Data/Information for Informed Decision Making.

Highlights of the report:

Challenges in all 5 thematic areas:

- Nearly 30% of springs crucial to water security of people are drying and 50% have reported reduced discharge.
- Himalayan Tourism growing annually at 6.8% has created huge challenge related to solid waste, water, traffic, loss of bio-cultural diversity etc.
- With the projected arrival of tourists in IHR States to more than double by 2025, urgent actions will be needed to address critical issues of waste management and water crisis in addition to other environmental and social issues.
- In the north eastern States, thousands of the households continue to practice slash and burn (shifting cultivation) that need to be addressed in view of ecological, food and nutritional security.

- Predominantly unskilled workforce remains a challenge for the mountains as well that need high priority to address migration of youths. Also challenges related to data availability, data authenticity, compatibility, data quality, validation, user charges for Himalayan States need addressal for informed decision making at different levels of governance.

Important recommendations made:

- Spring Mapping and Revival, using 8 steps protocol be taken up across Himalayan States in phased manner.
- Apply carrying capacity concept to all major tourist destinations; implement and monitor tourism sector Standards and apply performance based incentives for States faring well on the standards.
- Assessment of nature & extent of Shifting Cultivation area, improved policy coherence, strengthened tenurial security & improved access to related programs/schemes are other key recommendations to transform shifting cultivation.
- Strengthening of skill & entrepreneurship will require focus on identified priority sectors where mountains have advantage, investment in trainers, assessors and training centers in industry partnership.
- Having a Central Data Management Agency for Himalayas to provide data with high fidelity scenario while addressing data sharing, access, authenticity and comparability issues will go a long way in addressing data related issues.

The call for actions includes:

- Setting up of a Himalayan Authority for coordinated and holistic development of entire Himalayan region.
- Launching of "Himalaya Calling": An Awareness to Action Campaign as people's movement.
- Setting up of Mission on Spring Water Management in Himalayas, National Mission/Program on Transforming Shifting Cultivation in North Eastern States, demand driven network of skill and entrepreneurship development Centers in Himalayan States, consortium of institutions of high learning for mountain specific research and technology, link with Hindukush Himalaya Monitoring and Assessment program (HIMAP) and Setting up Central Data Management Agency for Himalayan Database at GB Pant National Institute of Himalayan Environment and Development.

TOPIC: GS III, CONSERVATION, ENVIRONMENTAL POLLUTION AND DEGRADATION

21. Commute-related pollution: Kolkata shines among Megacities

Source: The Hindu

Why the news:

- A report, titled ‘The Urban Commute and How it Contributes to Pollution and Energy’, compiled by the Centre for Science and Environment (CSE), has been released.
- The report is an analysis of 14 cities in India on how they fare when it comes to pollution and energy consumption from urban commuting.

Exhausting fumes

A ranking of cities in terms of overall emissions and energy consumption



Space Jam: Vehicles jostling on the Howrah Bridge in Kolkata. ■ AFP

1. Bhopal
2. Vijayawada
3. Chandigarh
4. Lucknow
5. Kochi
6. Jaipur
7. Kolkata
8. Ahmedabad
9. Pune
10. Mumbai
11. Hyderabad
12. Bengaluru
13. Chennai
14. Delhi

Basis for ranking of the cities:

- In the study, with an aggregate of toxic emissions from urban commuting practices, such as particulate matter and nitrogen oxides, the cities were ranked based on calculations of heat trapping (CO2). The study took two approaches to rank the cities one based on overall emission and energy consumption and the other on per person trip emissions and energy consumption.

Performance of various cities:

- Kolkata, which comes in at the sixth place on overall emissions, won among the six megacities.
- Bhopal leads the list on the lowest overall emissions.
- Delhi and Hyderabad are the two cities that fare at the bottom of the table in terms of pollution and energy use.
- In terms of overall emissions and energy consumption, Bhopal was followed by Vijayawada, Chandigarh and Lucknow.

- In fact, smaller cities such as Ahmedabad and Pune ranked below Kolkata for overall emissions.
- Delhi ranked at the bottom of the table for overall emission. Hyderabad, Bengaluru and Chennai fared a little better than Delhi.

Key findings of the report:

- Motorization in India is explosive. Initially, it took 60 years (1951-2008) for India to cross the mark of 105 million registered vehicles. Thereafter, the same number of vehicles was added in a mere six years (2009-15).
- According to the report, though metropolitan cities scored better than megacities due to lower population, lower travel volume and lower vehicle numbers, they were at risk due to a much higher share of personal vehicle trips.
- Importance of public transport: Kolkata provides a resounding message that despite population growth and rising travel demand, it is possible to contain motorization with a well established public transport culture, compact city design, high street density and restricted availability of land for roads and parking. Both Kolkata and Mumbai have grown with a unique advantage of a public transport spine well integrated with existing land use patterns.
- Mumbai had the highest GDP but a lower rate of motorization compared with other megacities, proving that income levels were not the only reason for deciding a population’s dependence on automobiles.
- Chennai was the first city to adopt a non-motorized transport (NMT) policy in 2004 that aims to arrest the decline of walking or cycling by creating a network of footpaths, bicycle tracks and greenways.

V. INTERNATIONAL RELATIONS

TOPIC: GS II, INDIA AND ITS NEIGHBOURS

22. Indo - Pak Relations

Source: Indian Express

Why in news:

- Significant exchange between India and Pakistan has taken place since the establishment of new government in Pakistan.
- Pakistan’s Prime minister offered to walk two steps for every one step taken by India which has been responded by India as both a shared vision of peace and development.

- Pakistan has also resolved to resume bilateral cricket, improve people-to-people ties and resolution of differences through dialogue.
- Pakistan's delegation attended Atal Bihari Vajpayee's funeral.

Current Situation of Indo Pak relations:

- At present, there little trust between both the countries. Leaders from both the countries face political realities that could inhibit them from taking any major risks.

Way forward:

- Well-chosen words, however, will not be enough. The steps needed are clear.
- To kick start, the situation at the Line of Control urgently needs attention, and a restoration of the ceasefire would be a major move forward for both countries.
- Pakistan can get economic relief if it adheres to the international Financial Action Task Force's demands on ending terror financing.
- Pakistan should directly address India's concerns on cross border terrorism.
- India should agree to restore the SAARC process by attending the long-delayed summit due in Islamabad this year.
- Much work, preferably behind the scenes, is needed if both the governments hope to realise any of the objectives of their shared vision. India and Pakistan must build on diplomatic courtesy to restore equilibrium to ties.

TOPIC: GS II, BILATERAL AND MULTILATERAL GROUPINGS

23. Quad countries on Ocean Security

Source: ET+ The Hindu

Why in news:

Recently, a report containing 20 policy recommendations for the Quad countries by the think tanks have been released at the Vivekananda International Foundation (VIF).

Details of the report:

- The Quad grouping is one of the many avenues for interaction among India, Australia, Japan and the U.S. and should not be seen in an exclusive context. It should not be regarded in any comparative or in an exclusive context.
- Quad countries should work with partner countries to oppose the establishment of permanent Chinese military bases in the Indian Ocean Region (IOR)

- Quad nations should work in the IOR to help maintain independent security and economic policies by supporting high-quality alternatives to unilateral Chinese investments and "political alignments with regional objectives.
- They should enhance sea land defence capabilities in the Indian Ocean. Each nation will need to make judgement about its capabilities based on its interests. They should demonstrate China that their security needs can be met through cooperation and consultation with other nations and without recourse to a disruptive unilateral military presence.
- Quad countries should cooperate with and support the Indian Ocean Rim Association (IORA), the Indian Ocean Naval Symposium (IONS), the South Asian Association for Regional Cooperation (SAARC) and other regional framework in the Indian Ocean and South Asia.
- India, the US and Japan should invite Australia to participate in the currently trilateral maritime exercise.
- US and Japan should consider participation in the Asian Infrastructure Investment Bank (AIIB) to encourage high-standards for projects involving China and to build their economic cooperation with others, including Australia and Japan.

Background:

- The Indo-Pacific has been witnessing China muscling in especially in the hydrocarbon-rich South China Sea that has multiple claimants. China has also been aggressively wooing developing countries with infrastructure projects which have dubbed by critics as a debt traps.

QUAD

- Quadrilateral Security Dialogue (QSD) is the strategic dialogue between four countries-India, United States, Japan and Australia. It was originally initiated in 2007 but later disbanded with withdrawal of Australia. It has been recently revived and is being viewed as response to increased Chinese

ORIGIN:

- The history of quad is linked to Indian Ocean Tsunami of 2004 which created havoc Indonesia, Sri Lanka, India, Thailand, Myanmar etc. India deployed 32 ships and around 5000 troops for relief and rehabilitation of many of the affected countries and this capability of India surprised the world following which US announced that India, US, Japan and Australia would launch a coalition to collaborate the

massive relief and rehabilitation works. This led to birth of the Quad.

OBJECTIVES:

- Although the primary aim of this dialogue is to expand membership in this security focused group, the ulterior motive behind this is seen by many to form a strategic partnership deal against China's rise in the region. China has often been accused of unilaterally trying to alter the power axis in the region (especially the Indian Ocean region). It is trying to change the international rule based order in its own manner. While this may be the motive, the purpose or the course of action of this security dialogue is not yet known.
- It cannot be compared to a trade negotiation in which involvement of more parties helps in achieving uniformity of standards and higher efficiency in business and economics.

TOPIC: GS II, INDIA AND ITS NEIGHBOURS

24. India and China to improve military links

Source: The Hindu

Why in news:

- India and China have agreed to work towards full implementation of ongoing confidence-building measures (CBM) along the border as well as improve military to military interactions.
- This was agreed during bilateral consultations between Defence Minister and visiting Chinese State Councilor and Defence Minister.
- It was decided to expand the engagement between the Armed Forces relating to training, joint exercises and other professional interactions.
- Both sides also decided to work towards a new bilateral Memorandum of Understanding (MoU) on defence exchanges and cooperation to replace the MoU signed in 2006.

TOPIC: GS II, INDIA AND ITS NEIGHBOURS

25. China in favour of forging ties with India and Japan

Source: The Hindu

Why in news:

Recently, a Chinese article argued that instead of staying aloof, China should positively intervene in shaping the Indo-Pacific agenda and suggested China to forge closer ties with India, Japan and Australia.

New concepts:

- In the process, "China may deconstruct some concepts put forward by the U.S. and other countries that are not in China's interests, and replace them with new concepts that are beneficial to China by means of discourse substitution strategies".
- The article has highlighted the necessity of China's firmer connect with India, Japan and Australia — the three countries that are part of the U.S.-led Indo-Pacific quad.
- It suggested that the initiative should focus on shared interests with these countries to weaken their motivation to join Indo-Pacific countries to contain China.

US strategy in Indo Pacific:

- The article also highlighted the U.S.'s strategy for securing its interest in the Indo pacific. According to the article, US focuses on promoting democratic values as a political bedrock of its Indo-Pacific doctrine.
- It also has an economic dimension of developing exclusive economic and trade arrangements.
- US keeps on sowing discord between China and other countries as a part of Indo-Pacific diplomacy which opens the gates for joint military exercises and arms sales.

Anti US stand:

- China has launched a long campaign to win the trade war with the U.S., which is targeting transition to a digitally advanced economy. According to China, the trade war would be a marathon and not a sprint.
- It also asserted that US has adopted a policy to target China's rise as a strategic rival.

China to go high-tech:

- Analysts say that Made-in-China 2025 (MIC 2025) that promises to make China the global engine of advanced manufacturing, is the real target of U.S's trade war as recently it was highlighted that U.S. tariffs were targeting the "Made in China 2025" strategy.
- China is responding energetically to the heavy domestic demand for white collar jobs in high-end manufacturing, including those of self-driving cars, drones and other areas such as new materials and biomedicine.
- China is also expected to dramatically expand funding for semiconductor chips — its area of vulnerability within the MIC-2025 framework.

- China is in a good position to import products from other countries as an alternative to the U.S. Whereas one-fifth of U.S. imports are from China, China imports only 9.9% of its requirement from the U.S.

**TOPIC: GS II, INDIA
AND ITS NEIGHBOURHOOD**

26. India's Geopolitics in the Indo-pacific Region

Source: The Hindu

Why in news:

Various events in the recent times like the informal summit at Wuhan, Prime Minister's keynote speech at the Shangri-La Dialogue in Singapore, the Shanghai Cooperation Organisation (SCO) Summit in Qingdao have sparked a lot of analysis as to what kind of strategic positioning India is gearing itself; especially at a time when the U.S. and China are caught up in geopolitical rivalry in the Asia-Pacific.

India at Sangri La Dialogue:

In the Sangri La Dialogue at Singapore, the Indian PM proclaimed India's ambitions to garner influence in the Indo-Pacific region by:

1. Increasing engagement with the Association of Southeast Asian Nations (ASEAN)
2. Developing friendship with China
3. Maintaining cordial ties with Russia
4. Pursuing interests with Australia and
5. Engaging more with the U.S.

Difference in approaches of India and China in the Indo Pacific:

- As India and China pursue their interests in the littoral states spread across the Indo-Pacific region, the sea lanes and check points continue to be impacted.
- India pursues influence through:
 1. Heightened diplomatic engagement
 2. Bilateral engagement
 3. Military engagement
- Whereas, China has started to increase its influence through hard investments in littoral nations suffering from massive infrastructural deficits particularly in ASEAN nations which has influenced these nations to the point where despite an international ruling against its activities in the South China Sea (SCS), the ASEAN as a bloc agreed to cooperate with China on a Code of Conduct instead of pursuing the international ruling.
- The influence of China on certain ASEAN states like Cambodia has been such that during the 2016

ASEAN ministerial meeting, it refused to endorse the joint communiqué if it included the international court ruling against Beijing with respect to the South China Sea. China is today Cambodia's largest provider of foreign aid and has invested in dams, oilfields, highways, textile operations and mines.

- Philippines has been seeking resumption of harmonious relations with China, especially after 2016, when U.S. legislators blocked the sale of about 26,000 M4 rifles. Beijing provided rifles and police and guns to fight against extremists in the city of Marawi.
- ASEAN's trade with China far surpasses that with India, and Chinese foreign direct investment in ASEAN is nine times higher than India's.
- Despite India's cordial relations with ASEAN, India must go a step ahead of diplomatic hobnobbing to gather support to contain China's growing military presence and hard cash power in the Indo-Pacific region.

How deep is India's influence in its neighbourhood:

- So far, India has failed to provide any concrete plans for its immediate neighbourhood in South Asia.
- India Nepal relationship has been souring due to the 2015 fuel blockade.
- A failed strategic intervention in Sri Lanka has undermined India's regional leadership.
- Countries like Nepal and Sri Lanka have been demonstrating interest in partnering with China. China's multibillion dollar investments in Sri Lankan ports and cities have inched the country much closer to China. Sri Lanka has handed over its Hambantota port to China on a 99-year lease.
- Under its Belt and Road Initiative (BRI), China has over the years promised billions to littoral states in the Indian Ocean Region to build a series of ports, something resource-constrained India will find difficult to match.
- However, the overt-assertiveness of China has driven many countries in East and Southeast Asia to seek friendship with India. For instance, Indonesia and Singapore are looking to strengthen relations with India.
- ASEAN has a cultural affinity with India with its shared religious diversity, ancient ties and a sizeable Indian diaspora in countries like Singapore and Malaysia.
- After the U.S., India enjoys global soft power through its art, literature, music, dance and cinema.

- India is perceived by many in East Asia as a friendly democracy, making the country a safe ally to have in the long run.
- Japan has significantly increased its engagement with India and the two countries enjoy robust military ties.
- India and Australia have initiated the '2+2' dialogue signaling its interest in deepening a maritime security partnership with India.

Attempts to rephrase Sino Indian relations:

- At the SCO Summit China renewed its agreement with India on sharing data on the cross-border flow of waters from the Brahmaputra during the flood season.
- The two countries signed a protocol that would enable all varieties of rice exports from India to China, something that would help India rectify its adverse balance of payments against China.
- China has also suggested a trade target of \$100 billion by 2020, signalling a gradual reset in relations.

Way Forward:

- India should maximise its soft power in South, East and Southeast Asia even as it resets ties with China.
- With a strategic partnership with China, India can better pursue its own regional groupings like the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and Bangladesh, Bhutan, India and Nepal (BBIN) initiative.
- Strategic understanding with China can help streamline regional connectivity projects and help India gain influence in the region as India cannot match China's resource spending.
- India still has to develop a strategy to leverage its soft power and optimise its military power to effectively counter China's cash and hard power.

TOPIC: GS II, BILATERAL AND REGIONAL GROUPING

27. Exercise Peace Mission 2018

Source: The Hindu

Why in news:

- Exercise Peace Mission 2018, the joint military exercise of the Shanghai Cooperation Organisation (SCO), ended in Russia with the eight-member states undertaking joint training on combating terrorism.
- This is the first time India and Pakistan participated in the exercise, which began on August 24 at the firing ranges in Chebarkul.

- China welcomed the participation of the two south Asian countries in the exercise and said stability between the two countries was significant to the peace and development of the region and the whole world.

TOPIC: GS II, BILATERAL AND REGIONAL GROUPING

28. U.S-India 2+2 dialogue

Source: The Hindu

Why in news:

- The first U.S.-India 2+2 dialogue has been scheduled to be held in New Delhi which will discuss regional and strategic issues of Asia.
- It has been assumed that US is mindful of India's legacy ties with Russia, but does not appreciate its continuing defence cooperation with it.
- US is not sure of granting a waiver to India from sanctions if India went ahead with the planned purchase of S-400 missile defence system from Russia.

2+2 Dialogue:

- 2+2 Dialogue between India and US was agreed during visit of Prime Minister to US in June, 2017.
- It is similar to India-Japan 2+2 dialogue format between foreign and defence secretaries and ministers of the two countries. It replaces earlier India-US Strategic and Commercial Dialogue.
- The dialogues aimed enhancing strategic coordination between both countries and maintaining peace and stability in Indo-Pacific region.
- It puts strategic, defence and security relationship between two countries at the centre stage.
- It insulates India-US strategic relationship from collision over trade issues and deep divide on economic integration policies as trade and commercial issues that collided with strategic relationship between both countries' discussed in Strategic and Commercial Dialogue earlier.

S-400 Defence System:

- The S-400 Triumph air defence system integrates a multifunction radar, autonomous detection and targeting systems, anti-aircraft missile systems, launchers, and command and control centre. It is capable of firing three types of missiles to create a layered defence.
- The system can engage all types of aerial targets including aircraft, unmanned aerial vehicles (UAV), and ballistic and cruise missiles within the range of

400km, at an altitude of up to 30km. The system can simultaneously engage 36 targets.

- The S-400 is two times more effective than previous Russian air defence systems and can be deployed within five minutes. It can also be integrated into the existing and future air defence units of the Air Force, Army, and the Navy.
- U.S. administration expected some concrete outcomes such as concluding an enabling agreement on communication and expanding the scope of military exercises
- Operationalizing India-U.S. partnership in Asia would be part of the 2+2 agenda.

TOPIC: GS II, INDIA AND ITS NEIGHBOURHOOD RELATIONS

29. Myanmar rejects UN findings on 'genocide'

Source: The Hindu

Why in news:

- Myanmar has rejected the findings of a UN investigation alleging genocide by its military against the Rohingya communities living in Rakhine province of Myanmar.
- The UN probe on Monday detailed evidence of genocide and crimes against humanity perpetrated on a massive scale against the Rohingya.
- Myanmar's Ambassador to the UN questioned the UN report's findings, reiterating that Myanmar "did not accept the mandate of the mission because it has its own concern about the mission's impartiality.

Rohingya Crisis:

- Burmese security forces were engaged in carrying out a campaign of ethnic cleansing against Rohingya Muslims in Rakhine State.
- Over half a million Rohingya have fled to neighboring Bangladesh to escape killings, arson, and other mass atrocities. They are one of the largest stateless populations in the world
- The Rohingya, effectively denied citizenship under the 1982 Citizenship Law of Myanmar and have faced decades of repression and discrimination.
- About 120,000 remain internally displaced from waves of violence in 2012 and 2016, in dire humanitarian conditions. Since late August 2017, more than six lakh Rohingya Muslims have fled Burma's Rakhine State to escape the military's large-scale campaign of ethnic cleansing.
- The atrocities committed by Burmese security forces, including mass killings, sexual violence, and

widespread arson, amount to crimes against humanity.

- Military and civilian officials have repeatedly denied that security forces committed abuses during the operations, claims which are contradicted by extensive evidence and witness accounts.
- The Rohingya have faced decades of discrimination and repression under successive Burmese governments.

TOPIC: GS II, BILATERAL AND REGIONAL GROUPING

30. Challenges at BIMSTEC

Source: The Hindu

Why in news:

- The Bay of Bengal Initiative for Multisectoral Technical and Economic Cooperation (BIMSTEC) summit is scheduled to be held at Kathmandu.
- This summit would be another milestone for India after the BRICS-BIMSTEC Outreach Summit hosted by it in 2016, as the grouping has gradually emerged as a key vehicle to take forward India's regional, strategic and economic interests.

Factors that have driven India's interests in the BIMSTEC forum

1. Stagnation of the South Asian Association for Regional Cooperation (SAARC). It limited both the scope of India's growing economic aspirations as well as the role it could play in improving regional governance.
 2. India's resolve to maintain its development particularly its North East region and to ensure that an unstable neighbourhood does not drag its growth.
 3. India's desire to link South Asia to the economically dynamic Southeast Asia is also part of this strategy.
- However, India did not stop its efforts in revitalising the SAARC grouping whenever the opportunities emerged.
1. At the 18th SAARC Summit in Kathmandu, in 2014, India proposed the SAARC Motor Vehicles Agreement. However, this could not progress due to resistance from Pakistan. This compelled Bangladesh, Bhutan, India, and Nepal (BBIN) to sign the BBIN Motor Vehicles Agreement in 2015.
 2. Pakistan also opted out of the ambitious SAARC Satellite project proposed by India, leading to a change in its name to the South Asia Satellite.

This refutes the tendency to see India's interests in BIMSTEC as part of its strategy to isolate Pakistan and position BIMSTEC as an alternative to SAARC.

Challenges for India at these two regional groupings:

- India is currently being the largest contributor to the BIMSTEC secretariat's budget contributed 32% of the total secretariat budget for 2017-18. With the Secretariat planning to strengthen its capacity by increasing human resources and the number of officials representing each member state, India may need to consider allocating more resources. India's generosity would be a key test of its commitment to the sub regional grouping.
- Another issue would be for India to counter the impression that BIMSTEC is an India-dominated bloc, a problem that it faced for a long time in SAARC.
- China has long desired to be part of the SAARC grouping. Some SAARC members also want it to balance India's dominance. China currently has observer status in SAARC.

Way forward:

- Today, most of the smaller neighbours (SAARC) are more willing to engage so as to benefit from India's economic rise. Nonetheless, to moderate suspicions that BIMSTEC is an India-dominated bloc, India will need to show sensitivity to the concerns of smaller neighbours.
- India will have to carefully navigate the emerging regional geopolitics, as many of the elements that made SAARC hostage to political rivalry and turned it into a defunct mechanism can re-emerge in BIMSTEC.

BIMSTEC

- It is regional group of seven countries in South Asia and South East Asia lying in littoral and adjacent areas of Bay of Bengal constituting contiguous regional unity.
- It was established on 6 June 1997 through Bangkok Declaration. It is headquartered in Dhaka, Bangladesh. Its member countries are India, Nepal, Bangladesh, Bhutan, Sri Lanka from South Asia and Myanmar, Thailand from South East Asia. They are collectively home to around 1.5 billion people which constitute around 22% of global population.
- BIMSTEC's main objective is to promote technological and economic cooperation among south Asian and south-east Asian countries along coast of the Bay of Bengal. The grouping is sector-driven cooperative organization, started in 2006 with six sector including trade, technology, energy, transport, tourism and fisheries.

- In 2008, it was expanded to embrace eight more sectors agriculture, public health, poverty alleviation, counter-terrorism, environment, culture, people to people contact and climate change.

VI. SCIENCE & TECHNOLOGY

TOPIC: GS III, AWARENESS IN SPACE

31. ESA's Aeolus Satellite

Source: The Hindu, ESA's website

Why in news:

- The European Space Agency (ESA) has successfully launched a satellite that will measure winds around the globe and help improve weather forecasting.
- The Earth Explorer Aeolus satellite was launched on a Vega rocket from Europe's Spaceport in Kourou, French Guiana on August 22.

About Aeolus satellite:

- Aeolus is the first satellite mission to acquire profiles of Earth's wind on a global scale. These near-realtime observations will improve the accuracy of numerical weather and climate prediction and advance our understanding of tropical dynamics and processes relevant to climate variability.
- Aeolus is the fifth in the family of ESA's Earth Explorer missions, which address key scientific challenges identified by the science community and demonstrate breakthrough technology in observing techniques.
- Named after Aeolus, who in Greek mythology was appointed 'keeper of the winds' by the Gods, this novel mission will not only provide much-needed data to improve the quality of weather forecasts, but also contribute to long-term climate research.
- The Aeolus satellite carries just one large instrument – a Doppler wind lidar called Aladin that will probe the lowermost 30 km of the atmosphere to measure the winds sweeping around our planet.
- Aeolus orbits in a Sun-synchronous, dusk/dawn orbit, 320 km above Earth. This is a relatively low orbit and a compromise between acquiring the measurements and keeping fuel consumption to a minimum. A lower altitude increases the amount of fuel needed to maintain a steady orbit over the life of the mission.
- The dusk/dawn orbit – where the satellite crosses the equator at 06:00 and 18:00 (local time) –

provides maximum illumination from the Sun and a stable thermal environment.

Significance of the mission:

- Many aspects of our lives are influenced by the weather. It goes without saying that accurate forecasts are important for commercial undertakings such as farming, fishing, construction and transport – and in general make it easier to plan the days ahead.
- In extreme circumstances, knowing what the weather will bring can also help save lives and protect property. Although weather forecasts have advanced considerably in recent years, meteorologists urgently need reliable wind-profile data to improve accuracy further.
- Aeolus wind mission will demonstrate that measuring global wind-profiles from space, using laser technology, can meet this requirement. In addition, its data will be used in air-quality models to improve forecasts of dust and other airborne particles that affect public health.

TOPIC: GS III, SCIENCE AND TECHNOLOGY- DEVELOPMENTS AND THEIR APPLICATIONS AND EFFECTS IN EVERYDAY LIFE

32. World Bank launches world-first Blockchain Bond

Source: Livemint

Why the news:

- World Bank has launched world-first blockchain bond. Australia’s Commonwealth Bank (Comm. Bank) is the sole arranger of the issuance by the World Bank.
- The prototype deal, dubbed a “Bondi” bond – standing for Blockchain Operated New Debt Instrument as well as a reference to Australia’s most famous beach – is being viewed as an initial step in moving bond sales away from manual processes towards faster and cheaper automation.

Background:

- The World Bank, whose bonds carry an AAA rating, regularly uses its borrowing power to help develop new bond markets as well as pioneering new means for selling and trading the securities. It issues between \$50 billion and \$60 billion a year of bonds to back economic progress in developing countries.
- Australia is a popular test site for market developments because of its well-established financial infrastructure and the familiarity of international investors with the Australian dollar, which is one of the most-traded currencies in the world.

Significance:

- While there have been other prototypes or parallel simulation blockchain projects in the market before, the World Bank bond will be the first time that capital is raised from public investors through a legally valid bond issuance that uses blockchain from start to finish.

Blockchain Technology:

- Blockchain is decentralized incorruptible digital ledger for storing data across peer-to-peer network. It decentralizes information without it being copied. Information is held on blockchain through shared database which can be accessed on real-time basis. This database is not stored on physical servers but on cloud, which makes it easy to store unlimited data.
- Blockchain technology is not controlled by any single entity and has no single point of failure. It is transparent and incorruptible. It is kind of self-auditing ecosystem of digital value and blockchain network automatically checks every transaction that happens in it.
- The most popular application of technology so far has been cryptocurrency. But it is not limited to, financial transactions and can be also used in smart contracts, supply chain management logistics, sharing economy, crowd funding, governance, file storage and date management and Internet of Things (IoT).

TOPIC: GS III, AWARENESS IN THE FIELDS OF IT, SPACE, COMPUTERS, ROBOTICS, NANO-TECHNOLOGY, BIOTECHNOLOGY AND ISSUES RELATING TO INTELLECTUAL PROPERTY RIGHTS

33. Higgs Boson

Source: The Hindu, CERN

Why in news:

Six years after its discovery, the Higgs boson has at last been observed decaying to fundamental particles known as bottom quarks.

Significance:

- The finding, presented by the ATLAS and CMS collaborations at the Large Hadron Collider (LHC), is consistent with the hypothesis that the all-pervading quantum field behind the Higgs boson also gives mass to the bottom quark.
- The Standard Model of particle physics predicts that about 60% of the time a Higgs boson will decay to a pair of bottom quarks, the second-heaviest of the six flavours of quarks. Testing this prediction is crucial because the result would either lend support to the Standard Model – which

is built upon the idea that the Higgs field endows quarks and other fundamental particles with mass – or rock its foundations and point to new physics.

What is Higgs Boson?

- The Higgs boson is an elementary particle in the Standard Model of particle physics, produced by the quantum excitation of the Higgs field, one of the fields in particle physics theory. It is named after physicist Peter Higgs, who in 1964, along with six other scientists, proposed the mechanism, which suggested the existence of such a particle. Its existence was confirmed by the ATLAS and CMS collaborations based on collisions in the LHC at CERN.

What is the Standard model?

- Everything in the universe is found to be made from a few basic building blocks called fundamental particles, governed by four fundamental forces. Our best understanding of how these particles and three of the forces are related to each other is encapsulated in the Standard Model of particle physics.

Matter particles:

- All matter around us is made of elementary particles, the building blocks of matter. These particles occur in two basic types called quarks and leptons.
- Each group consists of six particles, which are related in pairs, or “generations”. The lightest and most stable particles make up the first generation, whereas the heavier and less stable particles belong to the second and third generations. All stable matter in the universe is made from particles that belong to the first generation; any heavier particles quickly decay to the next most stable level.
- The six quarks are paired in the three generations – the “up quark” and the “down quark” form the first generation, followed by the “charm quark” and “strange quark”, then the “top quark” and “bottom (or beauty) quark”.
- Quarks also come in three different “colours” and only mix in such ways as to form colourless objects.
- The six leptons are similarly arranged in three generations – the “electron” and the “electron neutrino”, the “muon” and the “muon neutrino”, and the “tau” and the “tau neutrino”. The electron, the muon and the tau all have an electric charge and a sizeable mass, whereas the neutrinos are electrically neutral and have very little mass.

Forces and carrier particles:

- There are four fundamental forces at work in the universe: the strong force, the weak force, the electromagnetic force, and the gravitational force.
- Gravity is the weakest but it has an infinite range.
- The electromagnetic force also has infinite range but it is many times stronger than gravity.
- The weak and strong forces are effective only over a very short range and dominate only at the level of subatomic particles. Despite its name, the weak force is much stronger than gravity but it is indeed the weakest of the other three. The strong force, as the name suggests, is the strongest of all four fundamental interactions.

Three of the fundamental forces result from the exchange of force-carrier particles, which belong to a broader group called “bosons”. Particles of matter transfer discrete amounts of energy by exchanging bosons with each other. Each fundamental force has its own corresponding boson – the strong force is carried by the “gluon”, the electromagnetic force is carried by the “photon”, and the “W and Z bosons” are responsible for the weak force. Although not yet found, the “graviton” should be the corresponding force-carrying particle of gravity.

The Standard Model includes the electromagnetic, strong and weak forces and all their carrier particles, and explains well how these forces act on all of the matter particles. However, the most familiar force in our everyday lives, gravity, is not part of the Standard Model, as fitting gravity comfortably into this framework has proved to be a difficult challenge.

Large Hadron Collider (LHC):

- LHC is the world’s largest and most powerful particle accelerator situated in a tunnel beneath the France Switzerland border near Geneva.
- Built by: European Organization for Nuclear Research (CERN)
- Aim: to allow physicists to test the predictions of different theories of particle physics and high-energy physics, and particularly prove or disprove the existence of the theorized Higgs boson and of the large family of new particles predicted by super symmetric theories.
- The LHC consists of a 27-kilometre ring of superconducting magnets with a number of accelerating structures to boost the energy of the particles along the way.
- Operation: Inside the accelerator, two high-energy particle beams travel at close to the speed of light before they are made to collide.

- The beams travel in opposite directions in separate beam pipes – two tubes kept at ultrahigh vacuum. They are guided around the accelerator ring by a strong magnetic field maintained by superconducting electromagnets.
- The electromagnets are built from coils of special electric cable that operates in a superconducting state, efficiently conducting electricity without resistance or loss of energy. This requires chilling the magnets to 3°C – a temperature colder than outer space. For this reason, much of the accelerator is connected to a distribution system of liquid helium, which cools the magnets, as well as to other supply services.
- Just prior to collision, another type of magnet is used to “squeeze” the particles closer together to increase the chances of collisions. The particles are so tiny that the task of making them collide is akin to firing two needles 10 kilometres apart with such precision that they meet halfway.

TOPIC: GS III, AWARENESS IN THE FIELDS OF IT, SPACE, COMPUTERS

34. BIS to set standards for the services sector too

Source: The Hindu

Why in news:

The Bureau of Indian Standards (BIS) has kicked off the process to set new standards to measure quality of services offered to consumers across different sectors, including telecom, aviation, e-commerce and healthcare.

- In this regard, BIS had recently called for a meeting of industry bodies to “persuade them to be part of the process and give their inputs.”
- The BIS pointed out that the initial focus will be the 12 champion services sectors identified by the government. These include IT, tourism and hospitality, transport and logistics, accounting and finance services, legal services, communication services and construction.
- The process was initiated after concerns over lack of standardisation, particularly with regards to after-sales service, in their feedback to the Ministry of Consumer Affairs.

Significance of the Service Sector and need for standards:

- Service sector is one of the key sectors of the Indian economy with a huge potential to grow into one of the largest markets of the world. Standards

can play a major facilitative role in this regard. It is important that the standardisation needs and priorities of the sector are determined.

Background:

- An online survey had found that in the absence of defined customer service standards in the country, a majority of consumers were not happy with after-sales services. As per the poll, 43% feel that mobile handset and computer manufacturers are the worst in after-sales services, followed by white goods firms (38%) and automobile companies (11%). About 93% of respondents said brands should at least acknowledge complaints from users within 72 hours. Many consumers complained that customer service numbers of many companies do not work.

Bureau of Indian Standards (BIS):

- BIS is the National Standard Body of India established under the Bureau of Indian Standards Act, 1986 for the harmonious development of the activities of standardization, marking and quality certification of goods and for matters connected therewith or incidental thereto.
- BIS has been providing traceability and tangibility benefits to the national economy in a number of ways - providing safe reliable quality goods; minimizing health hazards to consumers; promoting exports and imports substitute; control over proliferation of varieties etc. through standardization, certification and testing.
- It works under the aegis of Ministry of Consumer Affairs, Food & Public Distribution.
- The Minister in charge of the Ministry or Department having administrative control of the BIS is the ex-officio President of the BIS.
- BIS has its Headquarters at New Delhi and its 05 Regional Offices (ROs) are at Kolkata (Eastern), Chennai (Southern), Mumbai (Western), Chandigarh (Northern) and Delhi (Central).
- Composition: As a corporate body, it has 25 members drawn from Central or State Governments, industry, scientific and research institutions, and consumer organisations.
- It also works as WTO-TBT enquiry point for India.

**TOPIC: GS III, SCIENCE
AND TECHNOLOGY**

**35. EU-India to collaborate on developing
Next Generation Influenza Vaccine**

Source: DBT (Department of Biotechnology)

Why the news:

The European Union and India will collaborate in research and innovation for developing a next generation influenza vaccine to protect people worldwide. The EU is funding is under its programme for research and innovation 'Horizon 2020'.

Key facts:

- Both the EU and the Department of Biotechnology (DBT), Government of India, have committed EUR 15 million each to fund this joint call.
- The aim is to advance the efficacy, safety, duration of immunity, and reactivity against an increased breadth of influenza strains.
- The joint effort also aims to develop cost-effective and affordable influenza vaccine rapidly without compromising quality.
- There will be multi-disciplinary approach involving stakeholders who can represent any part of the chain from lab to market.
- The projects require minimum three applicants from Europe (three different EU member states) or countries associated to the EU programme Horizon 2020) and minimum three applicants from India.
- The projects are also 'Open to the World' and thus applicants from other countries can join the EU-India consortia.

Significance:

Improved influenza vaccines would help the international community to better prepare in the event of an influenza pandemic.

- The outcome of the project is expected to contribute to the achievement of Sustainable Development Goal 3 to ensure health and well-being for all and boost the Indian National Health Mission.
- This cooperation is another demonstration of the already robust cooperation between the EU and India based on the EU-India Science & Technology Cooperation Agreement concluded in 2001 and renewed in 2015 until 2020. On the mobility grants known as Marie Skłodowska-Curie Actions (MSCAs), which are part of Horizon 2020, India ranks first in terms of number of beneficiaries from third countries followed by China and USA.

- At the EU-India Summit in October 2017, it was agreed to upscale the collaborative research through co-funded and joint calls.

Why a Vaccine on Influenza?

- Vaccination plays a vital role in protecting humans against the flu (influenza). In the European Union it is estimated that vaccination against seasonal influenza alone, prevents up to 37,000 deaths each year.
- Seasonal influenza is a major health burden, with an estimated 500,000 deaths around the world each year. A further threat from influenza is the non-seasonal emergence of new strains, which have the potential to result in major influenza pandemics.
- Today, vaccines against flu are only moderately effective. In addition, current influenza vaccines need to be developed every year. Hence, the larger objective is to develop next generation influenza vaccine candidate(s) with improved efficacy and safety, duration of immunity, and reactivity against an increased breadth of influenza strains and/or from the outset of a large-scale influenza pandemic.

What is 'Horizon 2020'?

- Horizon 2020 is the EU's funding programme for research and innovation for the period 2014-2020 with a budget of almost €80 billion (– in addition to the private investment that this money will attract) for the entire period.
- It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market. It funds research in all areas of science and innovation through three pillars:
 - Excellent Science;
 - Competitive Industries, and
 - Tackling Global Societal Challenges.

**TOPIC: GS III, DISASTER AND
DISASTER MANAGEMENT**

36. Call for Code initiative

Source: Times of India

Why in news:

Global IT giant IBM has partnered with Indian IT companies for its 'Call for Code' initiative that aims to build global solutions for disaster management. Indian IT companies that will partner with IBM for Call for Code initiative include Persistent Systems, Invest India, Wipro, Capgemini and NASSCOM.

About the "Call for Code initiative":

- IBM's Call for Code initiative aims to bring startup, academic and enterprise developers together to respond to and recover from natural disasters. The initiative seeks to solve one of the most pressing societal issues of preventing, responding to and recovering from natural disasters. For this, IBM provide access to its cloud, data, Artificial Intelligence and blockchain technologies, along with training and code to developers. Through this initiative, IBM and David Clark Cause are joining forces to benefit their charitable partners such as United Nations Human Rights and American Red Cross. Since its inception in May 2018, over 35 organizations and over 20 IBM clients have participated in this initiative.

VII. PRELIMS/MISCELLANEOUS

37. International Buddhist Conclave 2018

Why in news:

- The President of India inaugurated the International Buddhist Conclave (IBC), 2018 recently in New Delhi.
- This is a 4 days long Conclave and has been organized by the Ministry of Tourism in collaboration with the State Governments of Maharashtra, Bihar and Uttar Pradesh at New Delhi and Ajanta (Maharashtra), followed by site visits to Rajgir, Nalanda and Bodhgaya (Bihar) and Sarnath (Uttar Pradesh).

Ministry of tourism site launched:

- The President also launched the Ministry of Tourism website on important Buddhist sites - indiathelandofbuddha.in and a new film showcasing the Buddhist sites in the country on the occasion.

Participating Countries:

- The Ministerial level delegation from Bangladesh, Indonesia, Myanmar and Sri Lanka have participated in the conclave and delegates from the following 29 countries are participating in the International Buddhist Conclave: - Australia, Bangladesh, Bhutan, Brazil, Cambodia, Canada, China, France, Germany, Hong Kong, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Norway, Russia, Singapore, South Korea, Slovak Republic, Spain, Sri Lanka, Taiwan, Thailand, UK, USA and Vietnam.

Investors' Summit:

- The Tourism Ministry also organized an 'Investors' Summit' during the Conclave to attract investments in developing world class infrastructure at Buddhist sites.

38. Rashtriya Poshan Maah

- The Ministry of Women and Child Development organized an orientation workshop for various stakeholders for participating in the Poshan Maah (National Nutrition Month) being celebrated in the month of September.
- The primary objective of the celebration of Poshan Maah is to take the messages of POSHAN to the grass root level.
- The programme is an initiative of WCD Ministry and NITI Aayog.
- It focuses on 8 themes – Antenatal Care, Optimal Breastfeeding (Early & Exclusive), Complementary Feeding, Anemia, Growth Monitoring, Girls-education, diet, right age of Marriage, Hygiene & Sanitation, Food Fortification. Various activities are planned for to the month of September which will be celebrated nationwide as Poshan Maah. Activities like- Prabhat Pheri, POSHAN Melas, POSHAN Rallies & Walks, Nukkad Nataks, Yuva Shakti Rallies, School Based Events, Recipe Demonstration, Public Events are planned.

Poshan Abhiyan

- POSHAN Abhiyaan (National Nutrition Mission) was launched by the Prime Minister on 8th March, 2018 from Jhunjhunu, Rajasthan.
- The programme through use of technology, strives to reduce the level of Stunting, Under-nutrition, Anemia and Low Birth Weight in Children, as also, focus on Adolescent Girls, Pregnant Women & Lactating Mothers, thus holistically addressing malnutrition.
- POSHAN Abhiyaan aims to ensure service delivery and interventions by use of technology, behavioural change through convergence and lays-down specific targets to be achieved across different monitoring parameters over the next few years.

39. India's first biofuel powered flight undertakes Maiden Voyage

- A historic Spicejet flight powered by indigenously produced aviation biofuel based on patented technology of CSIR-IIP Dehradun was flagged from Dehradun airport.
- Chhattisgarh Biofuel Development Authority was the supplier of the jatropha oil for the flight.
- With this maiden flight India joins the exclusive club of nations using biofuel in aviation. The use of bio jet fuel, apart from reducing greenhouse gas emissions by about 15 percent and sulfur oxides (SOx) emissions by over 99 percent, is expected to provide indigenous jet fuel supply security, possible cost

savings as feedstock availability at farm level scales up, superior engine performance and reduced maintenance cost for the airline operators.

40. Government of India and the World Bank sign \$300 Million Agreement for India's Energy Efficiency Program

Why in news:

- The Government of India and the World Bank signed a \$220 million Loan Agreement and a \$80 million Guarantee Agreement for the India Energy Efficiency Scale-Up Program.
- The Program, to be implemented by the Energy Efficiency Services Limited (EESL), will help scale-up the deployment of energy saving measures in residential and public sectors, strengthen EESL's institutional capacity, and enhance its access to commercial financing.

41. Indian choppers to remain in Male

- The two Indian military helicopters, gifted to the Maldives, are likely to stay back along with a 48-member crew and support staff for at least the next few months as talks between the two countries on their continued deployment in the island nation were positive.
- The lease agreement of the two helicopters, given to Maldives in 2013, has expired and the island nation had conveyed to India that it would not like to retain them. After several rounds of talks, however, there has been indication from the Maldives on its willingness to keep the two helicopters along with the crew and support staff, sources said.

Questions:

1. Critically analyse the role played by social media in elections in India. Do you think that there is need to regulate social media for maintaining effectiveness and transparency of elections in India. Suggest measures to curb misuse of social media during elections.
2. Although the legislative council does not play a visible role in the Indian legislative system even though it has relevance. Discuss
3. Untouchability has been abolished by the constitution since its commencement. However it still prevails in practice, only its form has changed. Discuss.
4. Quad started as a coalition to collaborate the massive relief and rehabilitation works but gradually changed into security dialogue. What are the contemporary circumstances for this manifestation?
5. It is being discussed that the sole motive behind the ongoing trade war is to prevent the China's mission Made in China-2025. Do you agree? What could be the reasons for hike in tariff by US on its traditional partners?
6. Critically analyse the difference in approach by major powers US, China and India for increasing their influence in the Indo- Pacific region.
7. Discuss the factors which led SAARC to lose its importance and emergence of BIMSTEC as an important regional group. Do you think that India tried to revive SAARC?

42. Reliance Industries Ltd (RIL) becomes the first Indian company to cross ₹ 8 trillion market capitalization:

- The Mukesh Ambani-led Reliance Industries Ltd (RIL) has become the first Indian company to cross ₹ 8 trillion market capitalization after its shares surged nearly 37% this year.

43. India's first interstate connected wind power project commissioned in Bhuj

- 126 MW wind power capacity, part of India's first inter-state transmission system (ISTS) auction, was commissioned in Bhuj, Gujarat.
- It was part of India's first ISTS auction was conducted by state-run Solar Energy Corporation of India Ltd (SECI) in February 2017.
- This was bid for projects to be connected on ISTS wherein power generated from one state (renewable resource rich state) can be transmitted to other renewable deficient states.
- The energy generated from this project is being purchased by Bihar, Odisha, Jharkhand and Uttar Pradesh.
- The first auction signifies major shift from earlier regime of state-specific feed-in-Tariff (FIT) model to Pan-India, market-driven mechanism. It also marks beginning of capacity additions in wind power based on market discovered tariffs, in line with the Government's plan of having 175 GW renewable energy by 2022.