WEEKLY CURRENT AFFAIRS MAGAZINE for

U.P.S.C. - C.S.E.

NOVEMBER-VOL-III-2021

16 November to 22 November

PIONEER ACADEMY's

PATHFINDER

CURRENT AFFAIRS FOR CIVIL SERVICES

Topic 1. SPECIAL COURT FOR MPS AND MLAS

Importance for Prelims: Polity

Will examine validity of special courts for MPs, MLAs, says SC

- In 2017, the Supreme Court had ordered that special courts be set up across the country to fast-track the long-pending trials of lawmakers.
- Following this, twelve special courts were originated across eleven States exclusively to do sitting MPs and MLAs.
- The special court in each State has jurisdiction over the entire State whereas the two in Old Delhi|city|metropolis|urban center} Old Delhi cases at intervals the precincts of Delhi or "partly Delhi".
- Reservation of the Committee of the Madras supreme court – it's questioned the constitutional validity of setting up Special Courts to completely attempt MPs and MLAs for numerous crimes.
- Special Courts can only be constituted by a statute and not by executive or judiciary.
- The Special Courts should be "offence-centric" and not "offender-centric."

What are the issues associated with the special courts?

- Special courts deprive the accused of their right to a rung of appeal.
- If the case of an MLA or MP whose offence will be tried by a magistrate is directly placed before a special court, the suspect would lose his right to defend his case before a magistrate and is also stripped of his right to create his 1st appeal before a sessions court.

Note –

- Section eight of the representation of the individuals Act, 1951, bans convicted politicians (for certain offences) from contesting. However,

those facing trial, no matter however serious the costs, ar free to contest.

Topic 2. CONSTITUTION BENCH

Importance for Prelims: Polity

CJI urged to list key cases before Constitution Benches

- A constitution bench consists of a minimum of 5 or more judges of the court that is ready up to make a decision substantial queries of law with regard to the interpretation of the constitution during a case.
- The provision for a constitution bench has been provided in the Constitution of India under Article 143.
- It is the Chief Justice of India who is constitutionally authorized to constitute a constitution bench and refer cases to it.
- Constitution benches are set up when the following circumstances exist:
    1. once a case involves a considerable question of law pertaining to the interpretation of the Constitution [Article 145(3)]. Article 145(3) provides, "The minimum number of Judges who are to take a seat for the purpose of deciding any case involving a considerable question of law on the interpretation of this Constitution or for the aim of hearing any reference under Article 143 shall be 5."
    2. once President of India has sought-after the Supreme Court's opinion on a question of fact or law under Article 143 of the Constitution. Article 143 of the Constitution provides for advisory jurisdiction to the Supreme Court of India. As per the availability, the President of India has the ability to address inquiries to the Supreme Court, that he deems important for public welfare. The Supreme Court upon reference advises the President by answering the question. However, such referral recommendation by the apex court isn't binding on the President, neither is it 'law declared by the Supreme Court'.
    3. when 2 or additional three-judge benches of the Supreme Court

have delivered conflicting judgments on the same point of law, necessitating a certain understanding and interpretation of the law by a bigger bench.

4. The Constitution benches are set up on ad hoc basis as and once the above-named conditions exist.

Topic 3. NATIONAL INTERLINKING OF RIVERS AUTHORITY (NIRA)

Importance for Prelims: Polity

Centre proposes setting up new body for river-linking projects in India

- The Centre has set in motion the method of making the National interlinking of Rivers Authority (NIRA), an freelance autonomous body for planning, investigation, financing and therefore the implementation of the river interlinking projects within the country.
- NIRA, to be headed by a Government of India Secretary-rank officer, can replace the present National water development Agency (NWDA) and can an as associate degree umbrella body for all river linking projects.
- The new body can coordinate with neighbouring countries and concerned states and departments and can even have powers on problems associated with atmosphere, wildlife and forest clearances under river linking projects and their legal aspects.
- NIRA can have the ability to lift funds and act as a repository of borrowed funds or cash received on deposit or loan given on interest.
- Besides, it'll even have a mandate to coordinate with neighbouring countries "as directed" by the Ministry of Jal Shakti or the Ministry of External Affairs.
- It will also have the power to set up a Special Purpose Vehicle (SPV) for individual link projects. Inter-State River Water Disputes: Article 262 of the Constitution provides for the adjudication of inter-state water disputes.
- Under this, Parliament might by law give for the adjudication of any dispute or complaint with respect to the utilization, distribution and management of waters of any inter-state river and river valley.
- Parliament may also give that neither the Supreme Court nor the other

court is to exercise jurisdiction in respect of any such dispute or criticism.

- The Parliament has enacted the two laws, the River Boards Act (1956) and the Inter-State Water Disputes Act (1956).
- The stream Boards Act provides for the establishment of watercourse boards by the Central government for the regulation and development of Inter-state river and river valleys.
- A watercourse Board is established on the request of state governments involved to advise them.
- The Inter-State Water Disputes Act empowers the Central government to line up an ad hoc tribunal for the adjudication of a dispute between 2 or also states in relation to the waters of an inter-state river or river valley.
- The decision of the tribunal is final and binding on the parties to the dispute.
- Neither the Supreme Court nor the other court is to possess jurisdiction in respect of any water dispute which can be referred to such a court under this Act.

Topic 4. CHANDRAGUPTA MAURYA

Importance for Prelims: History

UP CM Yogi's claim: Chandragupta defeated Alexander, but isn't called 'great'

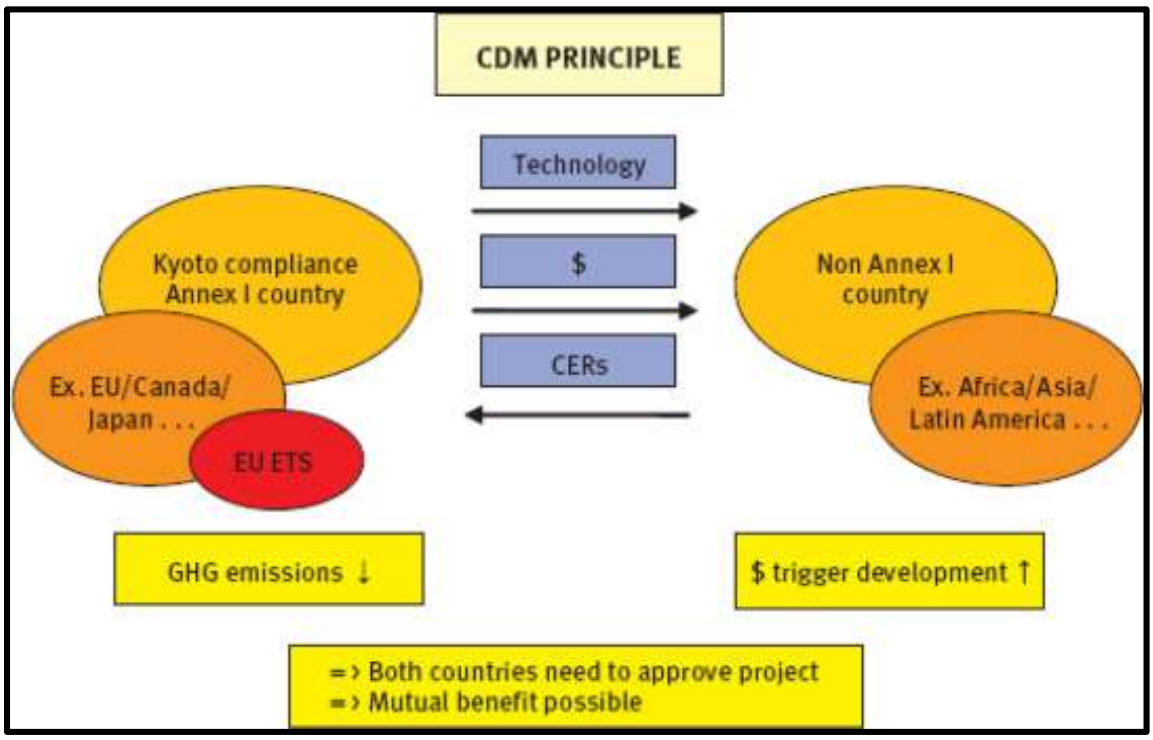
- Uttar Pradesh Chief Minister Yogi Adityanath on Sunday claimed that Chandragupta Maurya, who founded the Mauryan kingdom, had defeated Alexander of Macedonia, and however historians didn't describe him as "great".
- Alexander died in 323 BC, a few years after his Indian campaign.
- There is a few discussion among historians over when Chandragupta came to power, however it is generally believed to possess been when Alexander's death.
- About Chandragupta Maurya In 321 BC, Chandragupta Maurya, with the help of Chanakya (author of Arthashasthra) founded the Mauryan dynasty when overthrowing Nanda dynasty.
- The Mauryan Empire was the 1st most powerful Indian empire to bring the whole Indian subcontinent under a single rule.
- The Mauryanempire under Chandragupta Maurya spread its boundaries into Central Asia and Persia.
- Greek accounts mention him as Sandrokottos.
- Alexander had abandoned his India conquest in 324 BC and within a year, Chandragupta had defeated some of the Greek-ruled cities in the north-western part of the country.
- Megasthenes was the Greek ambassador at Chandragupta's court.
- He abdicated the throne in favour of his son, Bindusara, and went to Karnataka with Jain monk Bhadrabahu.
- He had embraced Jainism and is said to have starved himself to death according to the Jain tradition at Shravanabelagola.
- Alexander the good Alexander the good, also known as Alexander III or

Alexander of Macedonia was born in 356 BCE in Pella, Macedonia. He died on June 13, 323 BCE in Babylon.

- He was the king of Macedonia (336–323 BCE), who overthrew the Persian Empire. He spent most of his ruling years on an unprecedented military campaign through Asia and northeast Africa, and by the age of thirty, he had created one in every of the biggest empires of the traditional world, stretching from greece to northwestern India.
- In 326 BC, Alexander invaded India, after crossing the river Indus he advanced towards Taxila.
- He then challenged king Porus, ruler of the kingdom between the rivers Jhelum and Chenab.
- The Indians were defeated within the fierce battle (Battle of Hydaspes). Alexander captured Porus and, just like the different native rulers he had defeated, allowed him to continue to govern his territory.
- Alexander remained in India for 19 months (326-325 B.C.), which were full of fighting in July 325 BC Alexander and his army returned westward for home.

Topic 5. KYOTO PROTOCOL'S CLEAN DEVELOPMENT MECHANISM

Importance for Prelims: Environment



Coal 'phase down' is a right, says Minister

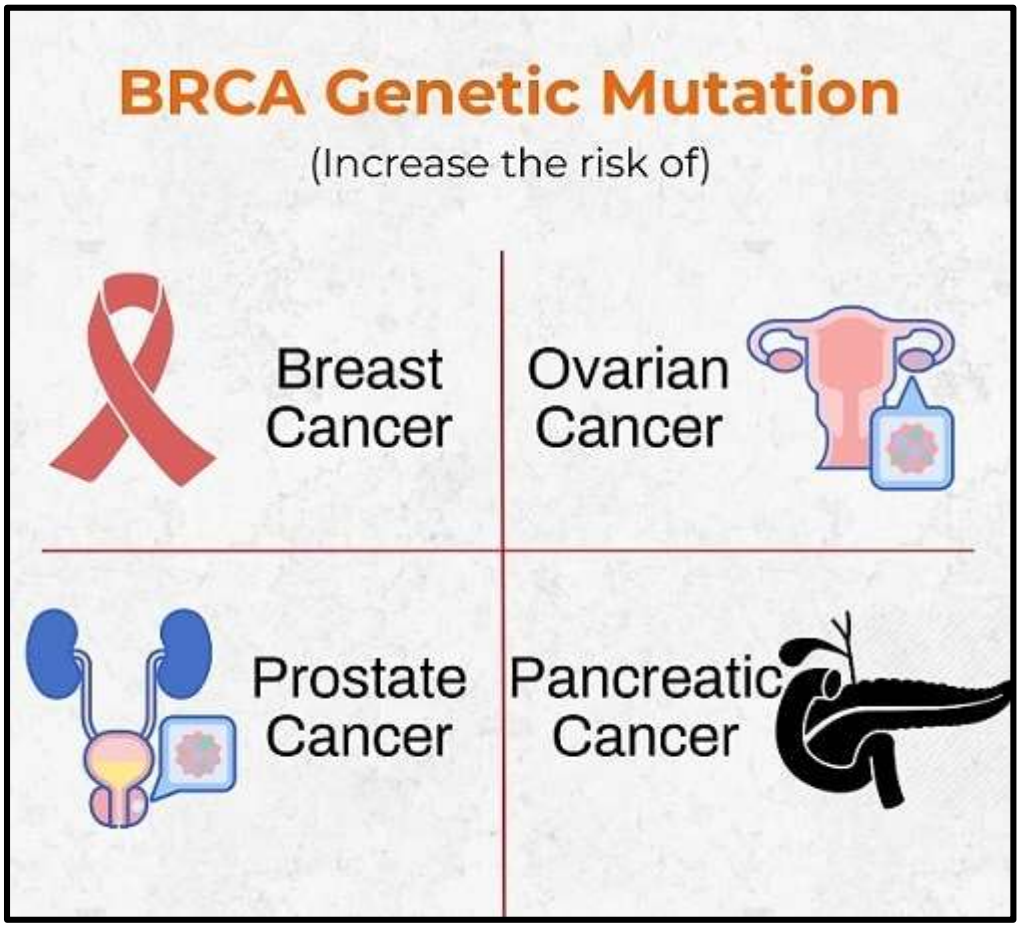
- The Clean Development Mechanism (CDM), defined in Article twelve of the Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries.
- Such projects will earn salable certified emission reduction (CER) credits, every equivalent to one tonne of CO2, which may be counted towards meeting Kyoto targets.
- The CDM is the main source of income for the UNFCCC Adaptation Fund.
- The Adaptation Fund is financed by a 2% levy on CERs issued by the CDM.
- Adaptation Fund (AF) was established under the Kyoto Protocol in 2001

and has committed US$ 532 million to climate adaptation and resilience activities.

- Under CDM, CER units are issued by the UNFCCC which is the global administrator of Kyoto mechanisms.
- It is the first global, environmental investment and credit scheme of its kind, providing a standardized emissions offset instrument, CERs.
- The projects should qualify through a rigorous and public registration and issuance method.
- Approval is given by the selected National Authorities. Public funding for CDM project activities should not lead to the diversion of official development assistance.
- The mechanism is overseen by the CDM Executive Board, answerable ultimately to the countries that have ratified the Kyoto Protocol.

Topic 6. BRCA GENE TESTING

Importance for Prelims: Science and Tech



BRCA gene testing is important for reducing cancer risk in women

- The BRCA gene test may be a blood test that's done to work out if you have changes (mutations) in your DNA that increase the danger of breast cancer.
- Mutations in either breast cancer gene — BRCA1 or BRCA2 — considerably increase the danger of breast cancer.
- Everyone has 2 copies of every|of every} of those genes—one copy inheritable from each parent.
- BRCA one and an unrelated BRCA two area unit proteins associated with breast tissues that facilitate repair broken damaged or destroy cells if the damaged DNA can't be repaired.

- They are so tumour suppressor or caretaker genes.
- But if BRCA itself has undergone a mutation, it loses the ability to repair DNA.
- This increases the susceptibility of the carrier of the mutant gene to breast and other cancers, notably ovarian cancer.
- Women with abnormal BRCA 1 or BRCA 2 genes have up to 80 per cent risk of developing breast cancer by age 90 and women with BRCA 1 mutations have up to 55 per cent risk of developing ovarian cancer.
- Scientists had long suspected that some cancers are inherited, especially breast and ovarian cancer.
- The discovery of BRCA mutations is of recent origin, starting in 1990.
- Testing for BRCA mutations became possible in 1994.
- While BRCA mutations are primarily associated with breast and ovarian cancer, there's some proof of their role in different cancers, particularly within the abdominal and thoracic cavities.
- Women connected to the BRCA mutation have significantly elevated risk of carcinoma.
- If BRCA mutation is tested positive for breast cancer, regular breast self-examination should begin at the age of eighteen.

Topic 7. BATS

Importance for Prelims: Science and Tech

A world with fewer bats around is one that has failed to understand the critical role they play in ecosystems

- Bats are the largest mammalian group after rodents, with over 1,300 species making up a quarter of all mammals.
- They occur on all continents except Antarctica and are particularly various in South Asia, with 114 species of insect-eating bats and fourteen fruit bats, conjointly called "flying foxes", occurring in India.
- They roost in massive colonies on trees, tree hollows, caves, rock crevices and abandoned manmade structures.
- They play a unique role in maintaining ecosystem structure, making a singular contribution to our food production, economy and well-being.
- They are the only mammals capable of true flight and have a singular sonar-based echolocation mechanism to capture prey at night.
- Their Significance – Seed dispersion – The diet of fruit-eating bats consists mostly of flowers and fruits like mangoes, bananas, guavas, custard apples, figs, tamarind and lots of species of forest trees.
- Pollination – Studies have found that bats play a significant role in pollenation, in the main of large-flowered plants, and in crop protection.
- Production boost – Some large insectivorous bats are also reported to feed on small rodents.
- Soil fertility – Bat droppings give organic input to soil and facilitate nutrient transfer, contributive to soil fertility and agricultural productivity.
- Health advantages – contribute to human health by reducing populations of mosquitoes and different insect vectors that spread malaria, dengue, chikungunya and different diseases.

Why do bats never fall sick?

Bats are reservoirs for viruses, however they ne'er fall sick. Flying results in toxic by-products that would damage cell contents.

Bats have evolved mechanisms to avoid such damage by suppressing their immune systems.

Their conservation consistent with the IUCN, regarding five per cent of bats are classified as vulnerable and another eleven per cent are information deficient.

Further, some species of fruit bats are categorized under Schedule five of the wildlife (Protection) Act, 1973, along side alternative vermin species like rats, creating it tough to lawfully conserve them.

Topic 8. SANTIAGO NETWORK

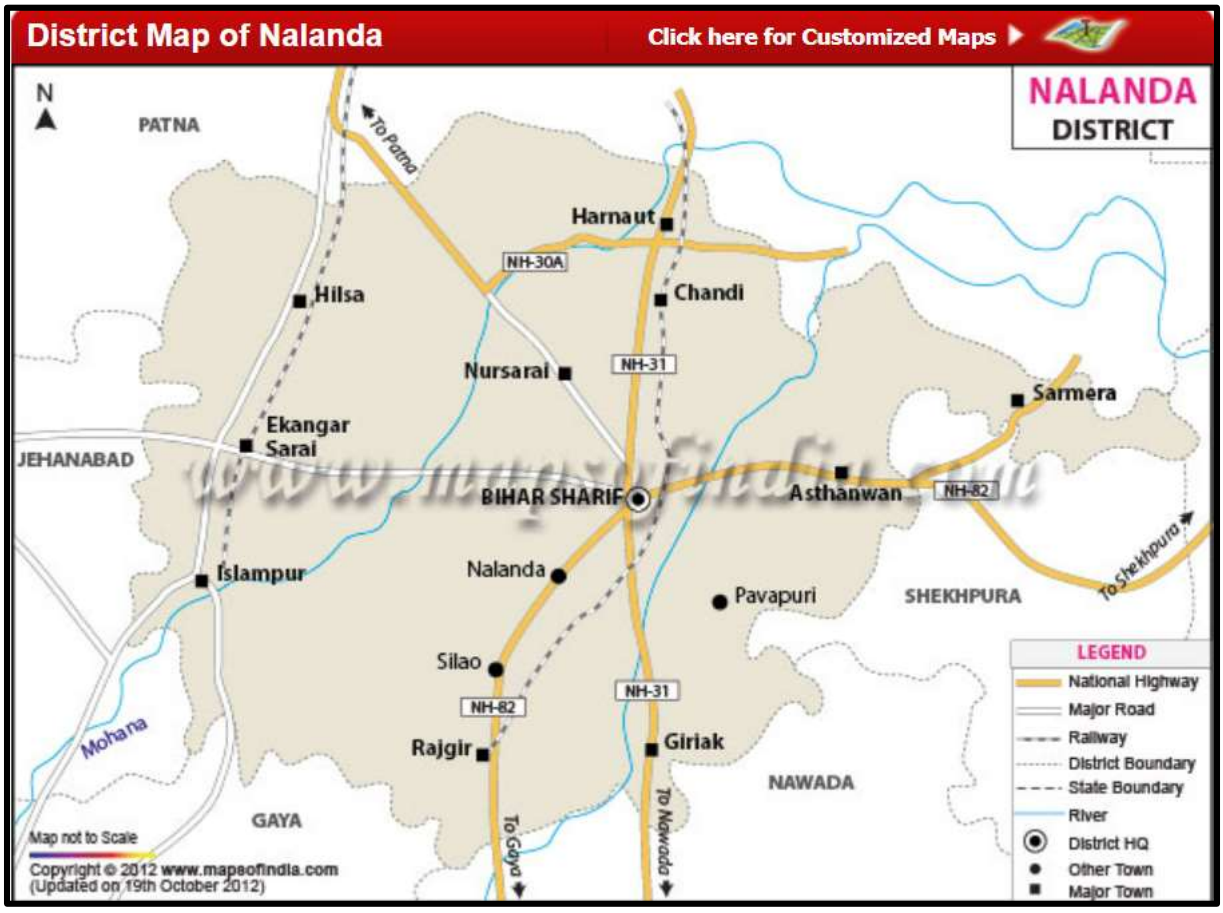
Importance for Prelims: Environment

COP-26 and environment

- The vision of the Santiago Network is to catalyse the technical help of relevant organizations, bodies, networks and specialists, for the implementation of relevant approaches for averting, minimize and addressing L&D at the native, national and regional level, in developing countries that are significantly vulnerable to the adverse effects of global climate change.
- The Santiago Network they need connect vulnerable developing countries with providers of technical help, knowledge, resources they have to handle climate risks comprehensively within the context of averting, minimizing and addressing loss and damage.
- Mandated at COP 25 in Madrid, the Santiago Network will further the work of the Warsaw International Mechanism for Loss and Damage.
- The Warsaw International Mechanism for Loss and damage associated with global climate change Impacts was established at the nineteenth session of the Conference of the Parties to the UNFCCC (COP 19) in 2013.
- It was mandated to boost information, strengthen dialogue and coordination, and enhance action to deal with loss and damage associated with the impacts of global climate change in vulnerable developing countries.
- The web site provides an area to channel assistance into operations, mid- to longterm investments, humanitarian services, and immediate technical desires.

Topic 9. NALANDA

Importance for Prelims: History



Recent scholarship has brought about a shift within the way Nalanda, the world's most ancient university, is seen.

- Nalanda, the ruins of 1 of the world's most prestigious seats of learning, is located ninety five kilometres from Patna, the capital of Bihar, and a hundred and ten kilometer from Bodh Gaya, the location of the Buddha's enlightenment. Declared a Word Heritage site in 2016, Nalanda is seen because the world's most ancient university, flourishing a lot of before Europe's oldest university, Bologna, came into being within the 11th-12th century.
- Contemporary sources, however, describe the location as a mahavihara, an excellent monastery.
- Nalanda, therefore, functioned as a premier monastic-cum-scholastic

establishment in ancient and early medieval India.

- Today, one will see there the remains of temples, monastic dwellings, votive structures and art works in stucco, bronze and stone dating from the fifth century C.E. to the twelfth century C.E. Literary Sources – As so much as literary sources are involved, most of the data on the history, functioning and, sometimes, the layout of the mahavihara comes from the accounts of Chinese Buddhist monks like Xuanzang(also referred to as Hiuen Tsang) and Yijing (also known as I Tsing), primarily the previous.
- Both travelled to India and stayed in the great monastery complex in the 7th century.
- Xuanzang's account links each the buddha (6th century BCE) and therefore the Mauryan king Asoka (c. 268-232 BCE) with Nalanda.
- The Chinese monk likewise credits Asoka with the development of a stupa/temple in honour of Sariputra, one among the Buddha's nearest disciples.
- Further, the anthropology findings—the material remains at Nalanda belong to the Gupta period/5th century C.E. onwards—do not support Xuanzang's pre-Gupta history of the location.
- The rulers of the Gupta family line (c. 300-600 C.E.) were sometimes famous for patronizing Brahmanical cults, however some of them as well supported Buddhism.
- Buddhist sources indicate that the Gupta King Vikramaditya sent his queen and son Baladitya to review under the famous Buddhist scholar Vasubandhu, who was based mostly at Nalanda. Some texts mention that King Narasimhagupta became a Buddhist monk and gave up his life through meditation.
- Xuanzang conjointly talks regarding the Guptas' royal reference to Nalanda.

- He reports that shortly after the Buddha's demise, a king called Shakraditya built a monastery at the site.
- Scholar Heras identifies Shakraditya with Kumaragupta I, Buddhagupta with Skandagupta, Tathagatagupta with Puragupta and Baladitya with Narasimhagupta. Nalanda apparently continuing to get pleasure from royal patronage in post-Gupta times as well: throughout the reign of Harshavardana (606-648 C.E.), the King of Kannauj (in Uttar Pradesh); and also the palas, who dominated over modern Bihar, West Bengal and bangladesh from the eighth through twelfth centuries. Xuangzang visited Nalanda throughout Harshavardana's reign.
- The PalasThePalas were known to be Buddhists.
- Dharmapala (c. 781-821 C.E.), the second Pala king, is understood to possess supported the establishment of 2 monasteries: Somapura (better known as Paharpur, currently in Bangladesh) and Vikramshila (in Bhagalpur in Bihar).
- An inscription from Nalanda records his gifting of a village for the maintenance of the good monastery.
- Another inscription from the location describes Devapala (c. 821 to 861 C.E.), Dharmapala's successor, as helping the ruler of Suvarnadvipa (Sumatra), Balaputra, build a monastery at Nalanda and acquire 5 villages to support its maintenance.
- It is also known for several gifts to the mahavihara, again independent of the Pala kings.
- It is wide control that Nalanda started declining within the late-Pala amount and was given a death blow around 1200 C.E by the invasion of BakhtiyarKhalji, the Afghan military commander of Delhi's Turkish ruler QutbuddinAibek.
- The mahavihara as a university Most of the knowledge on the functioning

of Nalanda as a university—its student strength, curriculum and buildings—comes from Chinese and Tibetan texts, that additionally emphasise the purity of its monastic discipline.

- Nalanda attracted students from China, Japan, Korea and from countries in SouthEast and Central Asia.
- Some students argue, although not on the basis of any evidence, that Nalanda's curriculum went beyond religious texts to incorporate literature, theology, logic, grammar, medicine, philosophy, the arts and metaphysics. Decline of Nalanda
- The 2 major theories that specify the decline of Nalanda each refer a potential destruction of the mahavihara and of a somewhat sudden or cataclysmal decline.
- The commonest theory for the decline of Nalanda says the location was ransacked and destroyed by BakhtiyarKhalji.
- This theory is entirely supported a Persian work by Minhaj al-SirajJuzjani (1193-1260) known as Tabaqat-iNasiri, which forms an elaborate history of the islamic world during the reign of the Delhi sultan Nasiruddin Mahmud Shah (1246-66).
- It is very important to notice that the word "Nalanda" is mentioned nowhere in Minhaj's account.
- The second theory broadly locates the decline in the context of the animosity between Brahmins and Buddhists.
- It finds expression within the writings of historians like D.N. Jha, B.N.S. Yadava, R.K. Mookerji and SukumarDutt

Topic 10. WTO FARM TALKS

Importance for Prelims: Economy

India resists rich nations' attempt to 'divide' developing nations, LDCs

- India is resisting makes an attempt by developed nations to "draw a wedge" between developing countries and LDCs within the ongoing negotiations for subsidising public stock holding programmes at the World Trade Organization, under the garb of an Associate in Nursing early resolution, and has asked poorer nations to not fall into the trap.
- The G33 group of developing nations, which includes India, has been seeking a permanent answer for rules on public stock holding which will enable developing nations and LDCs to provide subsidies for such programmes, including minimum support costs for farm manufacture, with none limitations, because it is essential for supporting the countries' poor and for making certain food security.
- Under the Agreement on Agriculture, developing countries and LDCs have to limit subsidies for public stock holding to 10 per cent of production value, beyond which they could be penalised.
- At the Bali Ministerial Conference in 2013, India managed to induce a `peace clause' as a part of an interim resolution that permits immunity against action on breach of the ceiling limit, however it's only limited to traditional staples and excludes new programmes.
- The G33, in its submission in September 2021, demanded that the permanent resolution ought to include all crops and all new programmes with no higher limit on total procurance (the Chair's text proposes a tentative higher limit of fifteen per cent).
- It also wants less onerous notification obligations.

Topic 11. COUNTRIES OF PARTICULAR CONCERN: US

Importance for Prelims: IR

U.S. designates Pakistan and China as countries of particular concerfor religious freedom violation

- The US selected several nations, as well as Pakistan, China, Iran, North Korea and Myanmar, as countries of specific concern for violation of spiritual freedom.
- US conjointly declared to position Algeria, Comoros, Cuba, and Nicaragua on a Special Watch List for governments that have engaged in or tolerated "severe violations of spiritual freedom.
- The U.S. also designated al-Shabaab, Boko Haram, Hayat Tahrir al-Sham, the Houthis, ISIS, ISIS-Greater Sahara, ISIS-West africa, JamaatNasr al-Islam walMuslimin and also the Taliban as 'Entities of specific Concern'.
- Country of particular Concern (CPC): Designation of the CPC is that the top tier recommendation by the United States Commission on International spiritual Freedom (USCIRF) once it comes to violation of international spiritual freedom.
- It is followed by Special Watch List Countries for severe violations.
- This is in line with the International religious Freedom Act of 1998 that was passed to market spiritual freedom as a foreign policy of the U.S.
- The Act aims to promote larger religious freedom in countries that have interaction in or tolerate violations of spiritual freedom, and to advocate on the behalf of people persecuted for his or her religious beliefs and activities in foreign countries.
- Nations on the CPC list for engaging in or tolerating systematic, ongoing, egregious violations of spiritual freedom. Special Watch List: Governments that have engaged in or tolerated "severe violations of

spiritual freedom" are included during this list.

Topic 12. THE INTERNATIONAL COURT OF JUSTICE (REVIEW AND RECONSIDERATION) BILL 2021

Importance for Prelims: IR

New Pak. law allows Jadhav to file appeal

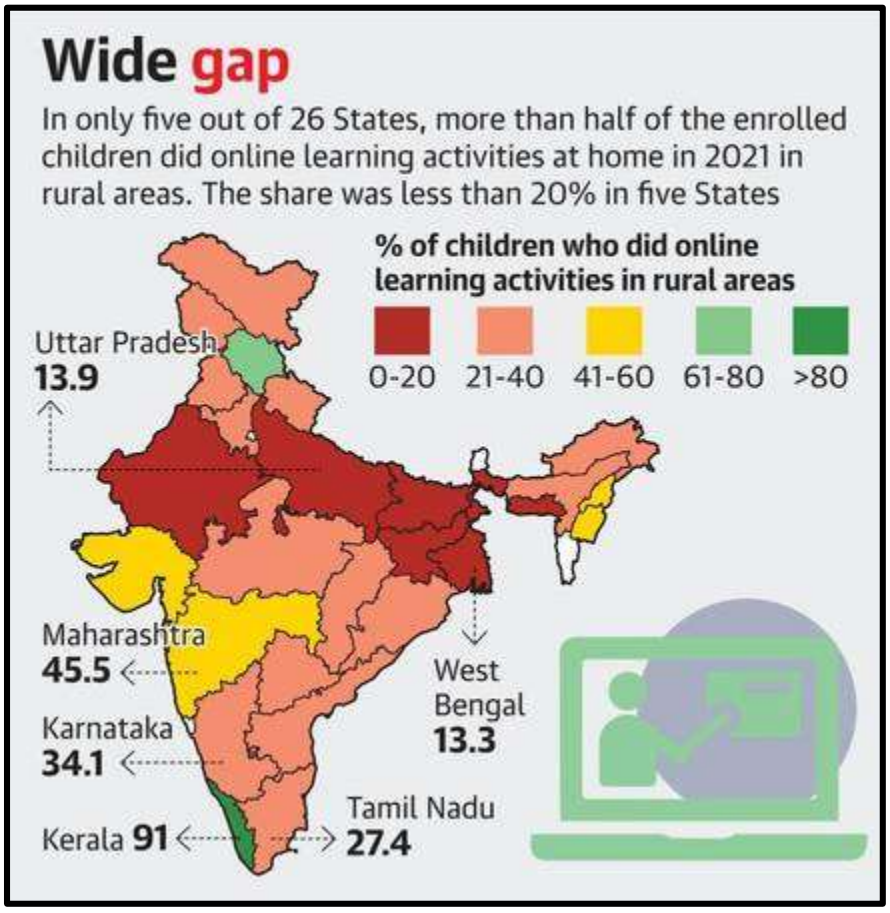
- The International Court of Justice (Review and Reconsideration) Bill, 2021 is aimed at fulfilling the requirement under the verdict of the ICJ.
- The law allowed Mr. Jadhav to challenge his conviction in the high court through a review process, that was a requirement of the ICJ verdict.
- Jadhav, a 51-year-old retired Indian Navy officer, was sentenced to death by a Pakistani military court on charges of espionage and terrorism in Apr 2017.
- India approached the International Court of Justice (ICJ).
- After hearing each side, The Hague-based ICJ issued a verdict in July 2019, asking Pakistan to offer India consular access to Mr. Jadhav and conjointly guarantee review of his conviction.
- International Court of Justice ICJ could be a principal judicial organization of the United Nations (UN).
- It was established in 1945 by a United Nations Charter and began working in 1946 because the successor to the Permanent Court of International Justice.
- It settles legal disputes between member countries and provides advisory opinions to approved United Nations Organs and specialised Agencies.
- An Indian, judge Dalveer Bhandari has been a member of the ICJ since April 2012.
- It is seated in the Peace Palace of Hague, Netherlands. Unlike the six principal organs of the United Nations, it is the only one not located in New York (USA).
- Consular Access Consular access is the ability of foreign nationals to

have access to consulate or embassy officials of their own country in the host nation. India had demanded the consular access to former Indian Navy officer Kulbhushan Jadhav in Pakistan under the rules of the Vienna Convention.

- The convention allows foreign nationals who are arrested or detained to have the access.

Topic 13. ASER REPORT 2021

Importance for Prelims: Governance



'School enrolment fell during pandemic'

- The sixteenth Annual status of Education Report (Rural) 2021 was released on-line on seventeenth November 2021 each year from 2005 to 2014, and then each alternate year until 2018, ASER has reported on the schooling standing of kids within the 5-16 age group across rural India and their ability to do basic reading and arithmetic tasks.
- Last year, COVID-19 interrupted this trajectory, along with most else.
- In 2020, ASER developed a completely new design, consisting of a phone-based survey that explored children's access to learning opportunities. With the pandemic extending into yet another year, field-based survey operations were still impossible on a national scale.
- As a consequence, ASER 2021 followed the same format of a phone-

based survey.

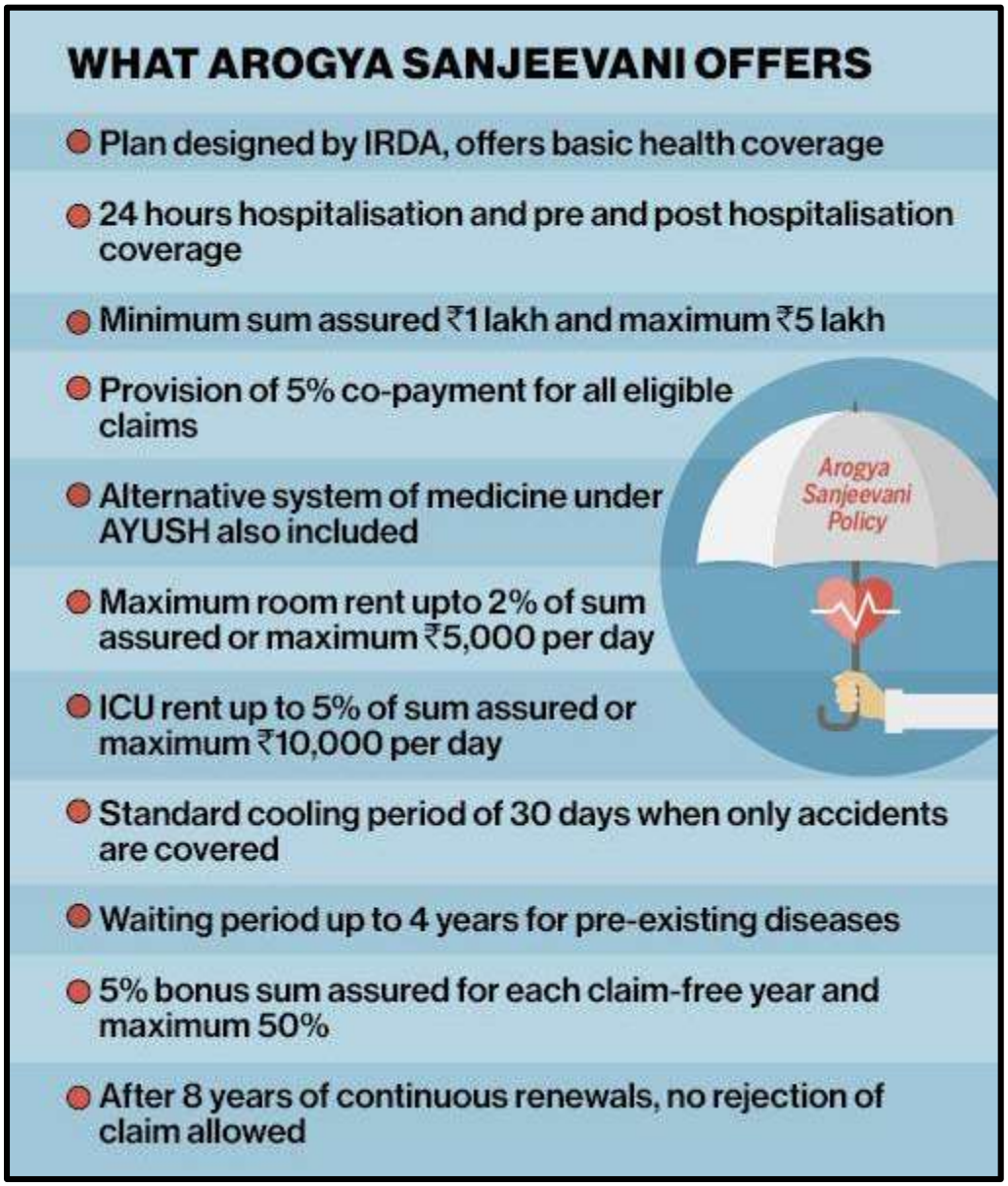
- Conducted in September-October 2021, eighteen months when the first lockdown, the survey explores how kids within the age group of 5-16 studied at home since the onset of the pandemic and therefore the challenges that the {schools|the faculties|the colleges} and households currently face as schools open up across states.
- ASER 2021 FINDINGS the percentage of rural children who weren't enrolled at school doubled during the pandemic, with government schools seeing a rise in enrolment at the expense of private schools, according to the Annual status of Education Report (ASER), 2021.
- Over a 3rd of children enrolled in classes one and two have not attended school in person.
- In 2018, only 2.5% of children were not enrolled in school.
- In both the 2020 and 2021 surveys, that figure had jumped to 4.6%.
- School Enrollment Patterns At an all-India level, there has been a clear shift from private to government schools.
- **No modification in kids aged 6-14 not enrolled in school**: The proportion of children not presently enrolled in school increased from one.4% to 4.6% in 2020.
- This proportion remained unchanged between 2020 and 2021
- **More older children in school than ever before:** Among older children in the age group of 15-16, an increase in government school enrollment from 57.4% in 2018 to 67.4%.
- **Tuition Big increase in children taking tuition:** At an all-India level, in 2018, less than 30% children took private tuition classes.
- In 2021, this proportion has jumped to almost 40%.
- This proportion has increased across both sexes and all grades and school types.

- Tuition is up across the country.
- **Increase in tuition-taking highest among the less advantaged**: Taking parental education as a proxy for economic standing, the proportion of kids with parents within the 'low' education class who ar taking tuition increased by 12.6 percentage points, as opposed to a 7.2 percentage point increase among kids with parents within the 'high' education category.
- Access To Smartphones Smartphone ownership has almost doubled since 2018 family economic status makes a difference in smartphone availability: As parents' education level will increase (a proxy for economic status), the likelihood that the household has a smartphone conjointly will increase Smartphone accessibility doesn't translate into access for kids: though over 2 thirds of all enrolled children have a smartphone at home (67.6%), over a quarter of those don't have any access thereto (26.1%).
- There is additionally a clear pattern by grade, with more kids in higher categories having access to a smartphone as compared to kids in lower grades.
- Learning Support At Home Learning support at home has decreased over the last year.
- School reopening is driving decreasing support: Among each government and personal school going kids, those whose schools have reopened get less support from home.
- Access To Learning Materials Almost all children have textbooks: Almost all enrolled children have textbooks for their current grade (91.9%).
- Slight increase in extra materials received: Overall, among enrolled kids whose schools had not reopened, 39.8% kids received some kind of learning materials or activities (other than textbooks) from their teachers

during the reference week.

Topic 14. AROGYA SANJEEVANI SCHEME

Importance for Prelims: Governance



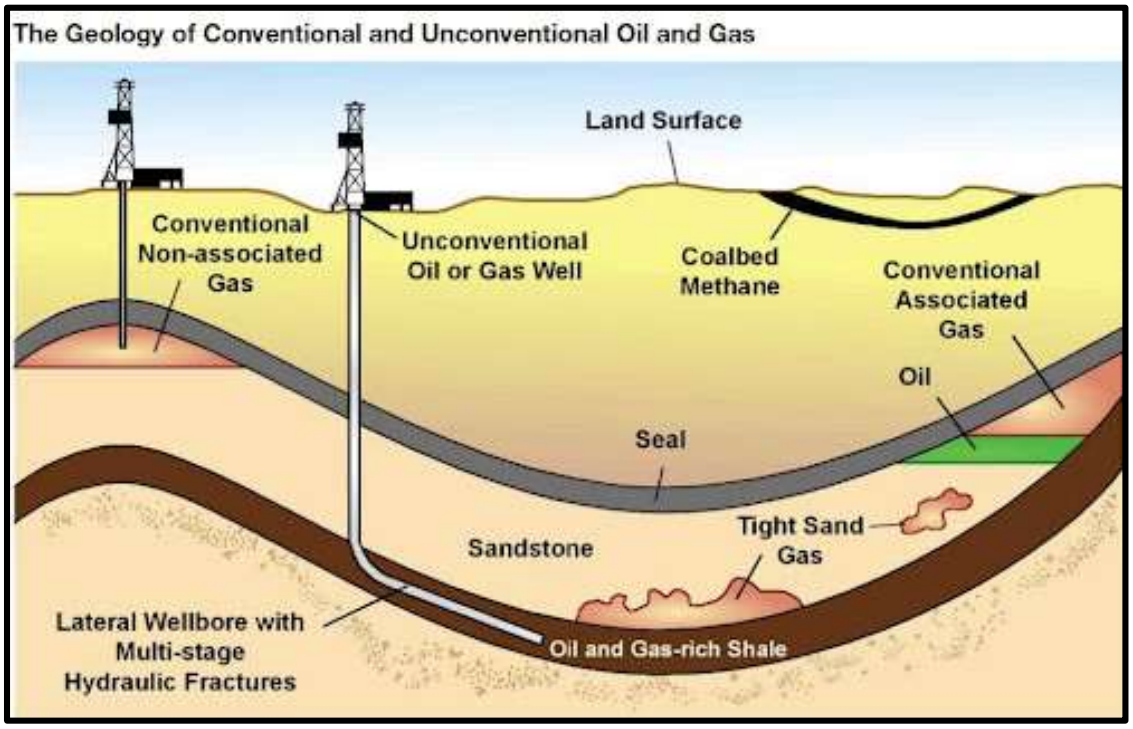
A new NITI Aayog report defies accepted logic that universal health coverage entails a strong role for the Government

- Under the rules, IRDAI asked the general and health insurers to supply product that may take care of basic health wants of consumers with most total insured of Rs five lakh and a minimum of Rs one lakh.
- The product will be named as Arogya Sanjeevani Policy, succeeded by the name of the insurance firm.

- No other name is allowed in any of the documents.
- The standard product ought to have the essential mandatory covers, no add-ons or facultative covers ar allowed to be offered along with the standard product and also the insurer could confirm the value keeping in view the covers proposed to be offered subject to compliant with guidelines.
- The standard product shall be offered on indemnity basis only and also the policy tenure shall be for a period of 1 year.
- IRDAI has fixed the minimum entry age as eighteen and maximum as sixty five years.

Topic 15.SHALE OIL

Importance for Prelims: Geography



Cairn Oil & Gas has announced that it is partnering US-based Halliburton to start shale exploration in the Lower Barmer Hill formation, Western Rajasthan

- Shale gas and oil is outlined as natural gas & oil from shale formations. The shale acts as each the source and also the reservoir for these unconventional hydrocarbons.
- Older shale wells were vertical while more recent wells are primarily horizontal and need artificial stimulation, like hydraulic fracturing, to produce.
- Only shale formations with certain characteristics can manufacture gas and oil. Shales are fine-grained sedimentary rocks which will be rich sources of petroleum and natural gas. shale gas is one among variety of unconventional sources of natural gas; others involve coalbed methane, tight sandstones, and methane hydrates.
- The key difference between oil and standard crude is that the previous,

conjointly known as 'tight oil', is found in smaller batches, and deeper than conventional crude deposits.

- Extraction of sedimentary rock gas: shale gas being an unconventional gas has complex exploration and production challenges than conventional gases. whereas standard gases are found within the porous rock, they will be sponged out simply.
- Unconventional gases like sedimentary rock gas ar placed under non-porous, lowpermeable rocks that do not allow free movement of gases. accordingly, the rocks containing unconventional gases need to be broken through external pressure.
- In cases of shale gas exploration, a series of wells (sometimes, horizontal also as vertical) is dug to succeed in the rock containing shale gas, and through the wells pressurized water, mixed chemically, is injected to fracture the rocks.
- The whole method is thought as fracking, and every fracking activity needs around five to nine million gallons of fresh water that is 5 to ten times over processes adopted for exploring conventional gas resources.
- Russia and also the United States ar among the biggest oil producers within the world, with a surge in oil production within the United States having played a key role in turning the country from an importer of crude to a internet exporter in 2019.
- Concerns:Water Intensive: The board of directors General of Hydrocarbons (DGH) states that shale gas extraction needs or so five to nine million litres of water. Potential for ground water contamination: Fracking may be a controversial technique of extracting shale gas.
- Chemicals, water, and sand are released at very high pressure into the earth to break rock and uncover gas.
- It is sort of a forced earthquake. Environmental campaigners say fracking

comes with a large risk of contaminating water provides due to the chemicals utilized in the method. By releasing toxic , radioactive gases and carcinogens, exposing individuals, land, and water to unhealthiness and poison, fracking has caused debilitating health and environmental damage.

- Many EU counties like France, Germany and Bulgaria have banned fracking.

Why the interest in shale gas?

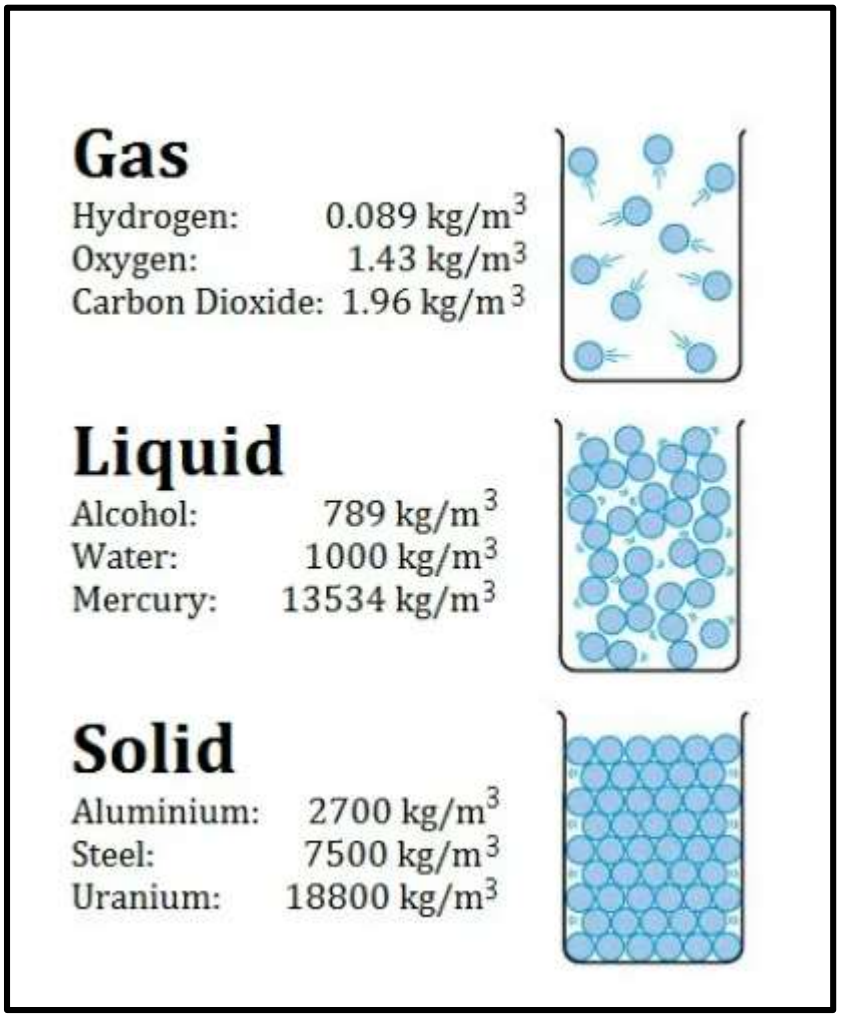
- The global energy mix, in the absence of a strong climate policy, is likely to remain highly fossil fuel-dependent.
- According to the International Energy Agency (IEA), even in 2035 about seventy five per cent of the energy demand are going to be met by fossil fuels.
- But among the fossil fuels, IEA predicts, the share of coal and oil can reduce which of gas, that is relatively cleaner, can increase within the next twenty years under the pressure to curb native pollution and greenhouse gases.
- The international demand for gas will increase by fifty per cent by 2035 compared to the 2010 level.
- The increase in gas demand will make many large countries increasingly importdependent.
- China's dependence on imported gas is probably going to increase to forty per cent by 2035; India's to forty five per cent and also the European Union's to over eighty per cent.
- Much of the shale resource exists in countries with limited endowments of conventional oil and gas supplies, such as South Africa, Jordan and Chile; or in the countries which are net gas importers and face increasing import dependency, such as the US and China; or in regions where

conventional hydrocarbon resources have largely been depleted, such as Europe.

- The exploitation of shale gas is, therefore, probably to reduce costs and import dependencies of states for gas. Prospects of oil exploration in India presently, there's no large-scale industrial production of oil and gas in India.
- The Government of India has carried out studies through various national and international agencies for the identification of shale oil and gas resources in the country.
- Based on the info available from standard oil/gas exploration within the country for the last such a lot of years, the country holds promising reserves of shale Gas & Oil resources and also the following sedimentary basins are considered prospective from oil and gas point of view: Cambay Basin Gondwana Basin KG Basin Cauvery Basin Indo-Gangetic Basin Assam & Assam-Arakan Basin.

Topic 16.PROPERTIES OF LITHIUM

Importance for Prelims: Science and Tech



Lithium prices may rise further on supply shortage

- lithium (Li), chemical element of Group 1 (Ia) in the periodic table, the alkali metal group, lightest of the solid elements.
- It is a soft, silvery-white alkali metal.
- Under standard conditions, it is the lightest metal and the lightest solid element.
- Like all alkali metals, lithium is extremely reactive and flammable, and should be keep in vacuum, inert atmosphere or inert liquid like purified kerosene or oil.
- When cut, it exhibits a metallic luster, but moist air corrodes it quickly to

a dull silvery gray, then black tarnish.

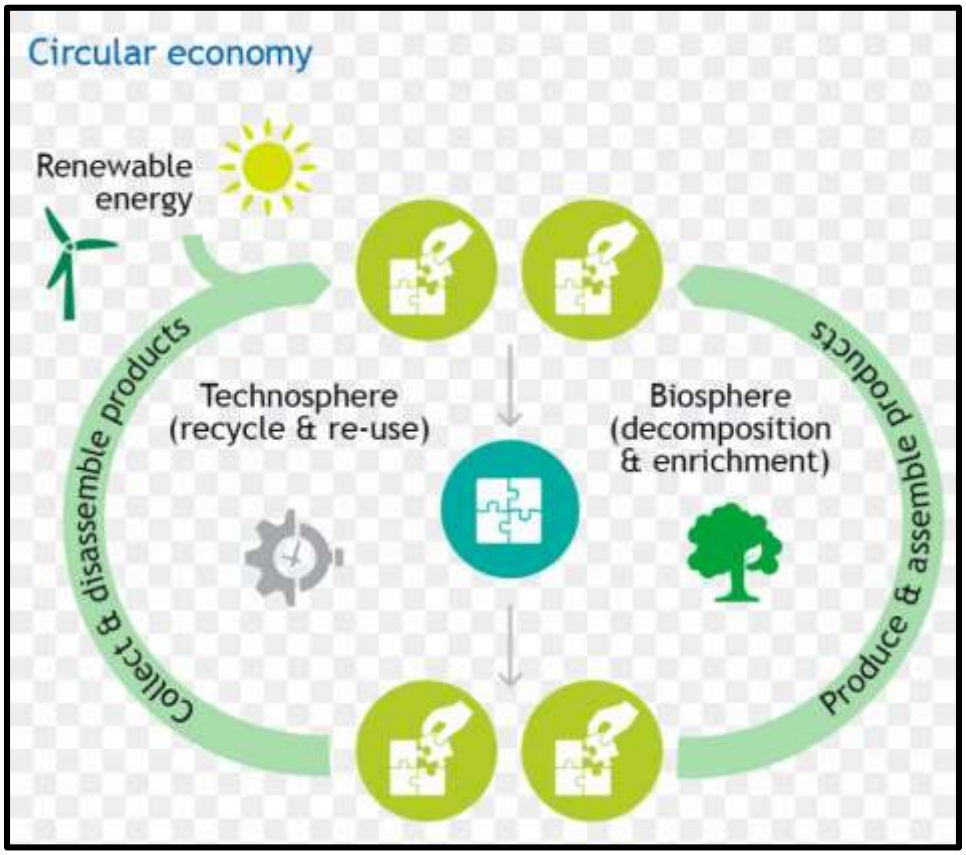
- It ne'er occurs freely in nature, however only in (usually ionic) compounds. because of its solubility as an ion, it's present in ocean water and is usually obtained from brines.
- Lithium metal is isolated electrolytically from a mixture of lithium chloride and potassium chloride.
- Lithium takes an active part in many reactions with organic and inorganic reactants.
- It reacts with oxygen to form monoxide and peroxide.
- Metallic Lithium reacts extremely vigorously with water.
- It has high specific heat which is the calorific capacity.
- It has very low density and low viscosity.
- Lithium is found only in salts and minerals.
- Applications of lithium Lithium and its compounds have several industrial applications, including heatresistant glass and ceramics, lithium grease lubricants, flux additives for iron, steel and aluminium production, lithium batteries, and lithium-ion batteries.
- These uses consume more than three-quarters of lithium production.
- Lithium is present in biological systems in trace amounts; its functions are uncertain.
- Lithium salts have proved to be helpful as a mood stabilizer and antidepressant drug within the treatment of mental disease like bipolar disorder.
- Bromine and lithium chloride along kind concentrated brine that absorbs the humidity under warm temperature.
- Brine is used within the producing of air conditioning systems.
- Alloys of the metal with manganese, cadmium, copper, and aluminium

are used to build aircraft's elements.

- Lithium triangle Lithium Triangle is an intersection of Chile, Bolivia and Argentina, known for high quality salt flats.
- Salar de Uyuni in Bolivia, Salar de Atacama in Chile and Salar de Arizaro in Argentina contains over 45%of well-known world lithium reserves.
- Beneath Salar de Uyuni, the world's largest salt flat lies the world's greatest lithium deposits.
- Bolivia, one in every of South America's poorest countries, envisions development by harvesting lithium on an industrial scale from underground seawater brines.
- It can be mined from rock or processed from brine.
- Lithium dissolved in underground saline aquifers called "brine", pumped to surface by wells and then allowed to evaporate in vast knee-deep ponds.

Topic 17. BIOBASED ECONOMY

Importance for Prelims: Economy



Renewable wood-based products can help combat climate change: FAO

- Biobased economy, bioeconomy or biotechonomy refers to economic activity involving the use of biotechnology and biomass within the production of products, services, or energy.
- The terms bioeconomy (BE) and bio-based economy (BBE) are generally used interchangeably.
- **However, it is worth to distinguish them:** The biobased economy takes into consideration the production of non-food goods.
- Bioeconomy covers both bio-based economy and the production and use of food and feed.
- The term 'bioeconomy' refer to because the production of renewable biological resources and also the conservation of those resources and

waste streams into price added product, like food, feed, bio-based product and bioenergy.

- It also exploits the untapped potential stored within millions of tons of biological waste and residual materials.
- The transition from a fossil fuel-based to a biobased economy is expected to reduce our dependence on fossil fuels and succeed additional sustainability as well as contribute to climate and environmental protection.
- The bioeconomy involves breaking up plants into their component parts as completely as possible and converting them into valuable materials.
- It is expected that this challenge will be met in the future by large biorefineries with many coordinated process steps.
- The concept of Bioeconomy was started by USA, Canada, and European
- Union (EU) and Australia to boost their economy by using bio-resources.
- Bioeconomy has emerged as a thought for tackling challenges like the over consumption of an overreliance on non-renewable natural resources. Forests and therefore the forest sector are important elements of a bioeconomy.
- National Mission on Bio-economy National Mission on Bio-economy was launched in Shillong, Meghalaya by the Institute of Bio-resources and sustainable Development (IBSD) under the Ministry of Science and Technology,
- In order to boost rural economy by utilizing bioresources.
- The mission is unique to south-east Asia and India has become one in all the few countries to possess tapped bio-resources, that once optimally utilised will produce a large number of jobs at village level.
- The purpose of the mission is to boost rural economy by utilizing bio-resources and make a large number of jobs at village level.

Topic 18.AMMONIA

Importance for Prelims: Environment

Rising ammonia levels in West Africa linked to biomass burning

- Its chemical formula is NH3.
- It could be a colourless gas and is used as an industrial chemical within the production of fertilisers, plastics, synthetic fibres, dyes and different product.
- More than eighty per cent of ammonia created is consumed within the producing of fertiliser, and most of the remainder goes into the production of formaldehyde.
- It occurs naturally within the environment from the breakdown of organic waste matter, and should conjointly find its way to ground and surface water sources through industrial effluents, contamination by sewerage or through agricultural runoff.
- **Effect of High Level of Ammonia:** According to experts in Chemistry, ammonia is stored for industrial use in liquid form under high pressure or in gaseous form at low temperature.
- Ammonia reduces the amount of oxygen in water as it is transformed to oxidised forms of nitrogen.
- Hence, it also will increase biochemical oxygen demand (BOD).
- If the concentration of ammonia in water is on top of one ppm it's toxic to fishes. In humans, long term ingestion of water having ammonia levels of one ppm or above might cause damage to internal organs. Ammonia, even in moderate concentration, will cause irritation to eyes, skin, nose and throat.
- It interacts directly upon contact with moisture present within the skin, eyes, oral cavity, and respiratory tract to form ammonium hydroxide. it's terribly caustic and disrupts the cell membrane lipids, ultimately leading

to cellular destruction.

- Ammonia in Humans Ammonia, which is highly soluble in water, is found in soil, air, and water; it is naturally present in the body.
- It is secreted by the kidneys to neutralize excess acid.
- However, it's highly diluted once within the atmosphere and doesn't have an effect on the human body to a noticeable level.

Topic 19. THE 1999 GOTHENBURG PROTOCOL TO ABATE ACIDIFICATION EUTROPHICATION AND GROUND-LEVEL OZONE

Importance for Prelims: Environment

Rising ammonia levels in West Africa linked to biomass burning

- The Protocol sets national emission ceilings for 2010 up to 2020 for four pollutants: sulphur (SO2), nitrogen oxides (NOx), volatile organic compounds (VOCs) and ammonia (NH3).
- This protocol is also known as Muti-effect protocol.
- These ceilings were negotiated on the basis of scientific assessments of pollution effects and abatement options.
- Parties whose emissions have a a lot of severe environmental or health impact and whose emissions are comparatively cheap to reduce can need to create the largest cuts.
- Currently, the protocol is under negotiation for a revised protocol.

Topic 20. BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL

Importance for Prelims: Environment

Ahmedabad: Vessel containing 'hazardous substances' intercepted, brought to Mundra Port

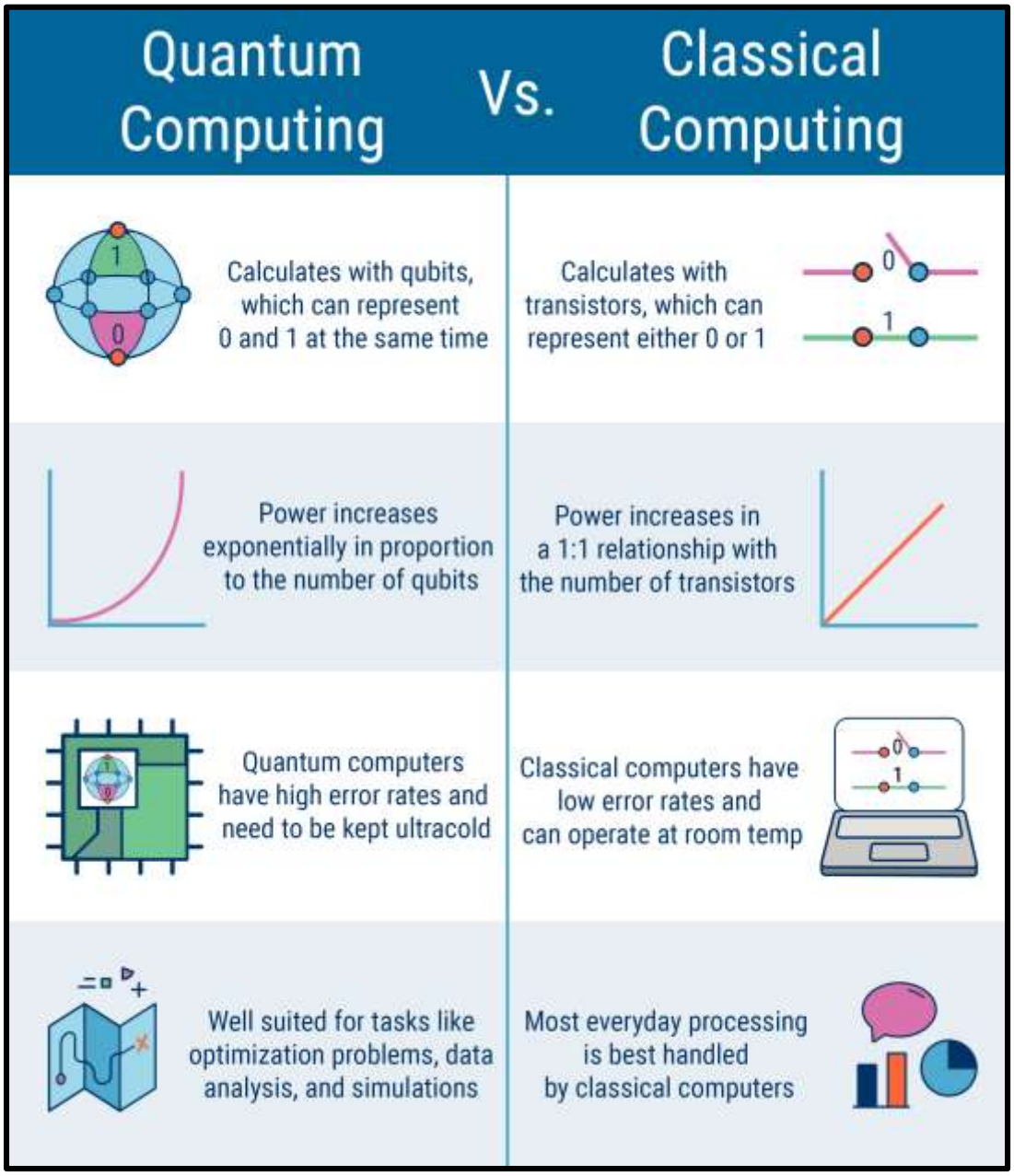
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal first came into force in 1992.
- The Convention puts an onus on exportation countries to make sure that hazardous wastes are managed in an environmentally sound manner within the country of import.
- The basel Convention places obligations on countries that ar party to the Convention. 151 Countries have ratified the Basel Convention as at

december 2002.

- These obligations ar to: Minimise generation of hazardous waste; guarantee adequate disposal facilities are available; management and reduce international movements of hazardous waste; guarantee environmentally sound management of wastes; and prevent and punish illegal traffic.
- It particularly focuses on preventing transfer of hazardous waste from developed to less developed countries.
- It provides for cooperation between the parties, as well as exchange of data on problems relevant to the implementation of the Convention.
- It applies prior Consent Approval procedure to manage the transboundary movement of the hazardous and different wastes.
- Non-parties cannot transport hazardous waste to and from each other unless specially agreed.
- Basel Convention states such transportation, illegal.
- The member nations to the convention are required to have domestic legislation for both prevention and the punishment of the illegal trafficking of such hazardous wastes.
- Conference of Parties (COP) may be a primary organ of the Basel Convention and is accountable to form choices regarding the operations of the convention.
- It meets biennially. India could be a member of the Basle Convention.
- It ratified the convention in June 1992 and brought it into force on twenty second Sept 1992.
- The Ministry of Environment, Forest & Climate Change (MOEF&CC) introduced Hazardous and Other Wastes (Management and Transboundary Movement) Rules of 2016.

Topic 21.QUANTUM COMPUTING

Importance for Prelims: Science and Tech



First quantum computer to pack 100 qubits enters crowded race

- IBM's newest quantum-computing chip, discovered on fifteen November, established a milestone of sorts: it packs in 127 quantum bits (qubits), making it the primary such device to achieve 3 digits.
- The 'Eagle' chip is also a step towards IBM's goal of creating a 433-qubit quantum processor next year, followed by one with one,121 qubits

named condor by 2023.

- Quantum Technology Quantum Technology is based on the principles of quantum physics that was developed within the early twentieth century to explain nature at the scale of atoms and elementary particles.
- The 1st phase of this revolutionary technology has provided the foundations of our understanding of the physical world, as well as the interaction of light and matter, and led to ubiquitous inventions like lasers and semiconductor transistors.
- A second revolution is currently underway with the goal of putting properties of quantum physics within the realms of computing.
- **Properties of Quantum Computing Superposition –** It is the ability of a quantum system to be in multiple states simultaneously.
- **Entanglement–** It means that the 2 members of a pair (Qubits) exist during a single quantum state.
- Changing the state of 1 of the qubits can instantaneously modification the state of the opposite one during a predictable method.
- This happens even though they're separated by very long distances. Einstein known as spooky 'action at a distance'.
- **Interference** – Quantum interference states that elementary particles (Qubits) cannot only be in more than one place at any given time (through superposition), however that a personal particle, like a photon (light particles) will cross its own trajectory and interfere with the direction of its path.
- Potential Applications For Quantum computing machine Learning computational Chemistry monetary Portfolio optimization Secure Communication Disaster Management Pharmaceutical logistics and programing Cyber Security Augmenting industrial revolution 4.0 National Mission on Quantum Technology and Applications (NMQTA)

Union Budget 2020-21 proposed to spend Rs 8,000 crore on the recently launched NMQTA.

- In 2018, the Department of Science & Technology unveiled a programme known as Quantum-Enabled Science & Technology (QuEST) and committed to investment Rs. eighty crore over the next 3 years to accelerate analysis.
- The mission seeks to develop quantum computing connected technologies amidst the second quantum revolution and create India the world's third-biggest nation within the sector after the United States and China.

Topic 22.UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (UNCLOS)

Importance for Prelims: IR

In a veiled dig at China, Defence Minister Rajnath Singh on Sunday said "some irresponsible nations" with their narrow partisan interests and hegemonic tendencies are coming up with wrong definitions of the UN Convention on the Law of the Sea (UNCLOS).

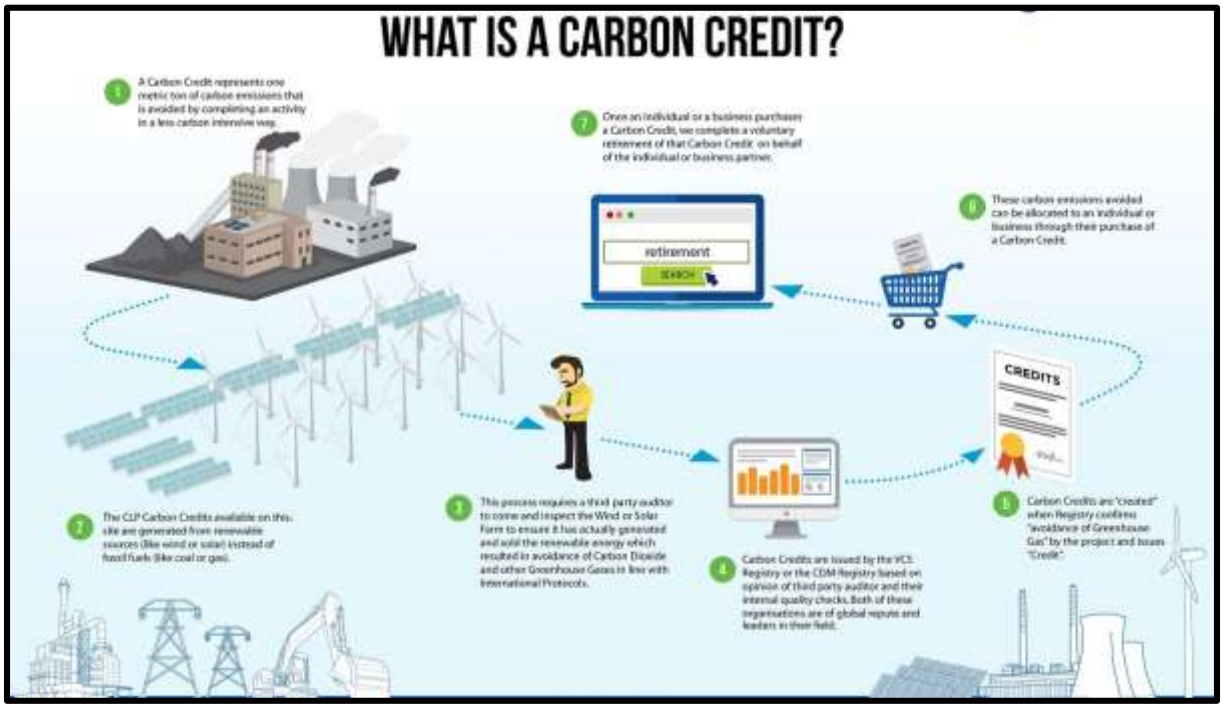
- UNCLOS or the United Nation's Convention on Laws of the ocean was formed to confirm freedom of shipping navigation at the ocean.
- This allowed ships of 1 country to move safely and freely in international waters.
- The UN Convention on the Law of the ocean guarantees that a coastal state won't hamper the correct of passage of foreign vessels if they don't threaten a nation's security.
- important terms under UNCLOS Territorial sea – consistent with UNCLOS, the territorial ocean may be outlined because the area that extends up to twelve maritime miles from the baseline of a country's coastal state.
- The territorial ocean is under the jurisdiction of that specific country; but, foreign ships (both merchant and military) ships are allowed passage through it.
- This variety of passage of territorial passage of foreign ships is known as an innocent passage.

- However, the correct to the innocent passage will be suspended if there's a threat to the safety of the coastal state.
- **Contiguous Zone** – The contiguous zone will be defined because the belt that extends twelve maritime miles beyond the territorial ocean limit.
- A coastal state's control on this space is restricted to interference of actions which may infringe its customs, fiscal, and immigration laws.
- It also can act if any activity within the contiguous zone threatens rules within the territorial ocean.
- It is feasible that vessels carrying noxious dangerous substances or waste could also be turned away on public health or environmental grounds.
- Exclusive economic zone
- The exclusive economic zone will be defined as a belt of water that extends up to two hundred nautical miles from the baseline of the coastal state.
- Thus it includes both territorial sea and contiguous zone.
- The exclusive economic zone provides the coastal state control over all economic resources such as fishing, mining, oil exploration, and marine research.
- The coastal state also has jurisdiction regarding protection and preservation of natural resources and marine environment.
- Continental Shelf The continental shelf are often outlined because the space whose outer limit shall not exceed 350 nautical miles from the baseline or shall not exceed a hundred nautical miles from the 2500 meters isobath.
- The coastal state has exclusive rights for exploring and exploiting its natural resources during this space.
- The state conjointly has the exclusive rights to authorize and regulate drilling on the shelf for all purposes.

- High Seas High seas is outlined as a result of the a section of the ocean that is not enclosed inside the exclusive economic zone, inside the territorial ocean, or inside the inner waters of a coastal state or archipelagic waters of an archipelagic state.
- High seas ar receptive all states for freedom of navigation, freedom of over flight, freedom to construct artificial islands installation, freedom of fishing, and freedom of research project.
- High seas are reserved for peaceful navigation through international waters.
- However, laws are created to avoid interference of slave trade, piracy, seizure of ships, illicit narcotics trafficking and unauthorized broadcasting.

Topic 23. CARBON CREDITS

Importance for Prelims: Environment



The Glasgow pact recently signed at COP26 deals with many issues of the Paris Agreement, such as finance, reporting of climate actions, transparency in climate actions, and rules for creating global market for trading in carbon offsets (carbon credits).

- Carbon credit could be a monetary instrument issued to an entity, a corporation or municipal body, for undertaking an activity, that has the impact of either avoiding emission of CO2 into the atmosphere or absorbing back a number of the already emitted CO2 (sequestration).
- A carbon credit could be a allow that permits the corporate that holds it to emit a certain quantity of carbon dioxide or other greenhouse gases.
- One credit permits the emission of a mass equal to one ton of CO2.
- Carbon credits were devised as a market-oriented mechanism to reduce greenhouse gas emissions.
- Companies get a group range of credits, that decline over time. they will sell any excess to a different company.

- Thus, "cap-and-trade" is an incentive to reduce emissions.
- Companies that pollute are awarded credits that permit them to still pollute up to a certain limit.
- That limit is reduced periodically. Meanwhile, the corporate might sell any unneeded credits to a different company that desires them. Negotiators at the glasgow COP26 global climate change summit in November 2021 in agreement to a world carbon credit offset trading market.
- **Its history –** With the signing of the Kyoto Protocol in 1997, a market was created for the reduction of greenhouse gases, assigning a monetary value to the reduction of emissions.
- One of the Flexible Mechanisms defined by the Kyoto Protocol is the Clean Development Mechanism (CDM).
- The signatory countries of the Protocol have agreed to reduction targets.
- Carbon credits received within the method of meeting these targets may be sold-out to governments or corporations that haven't been ready to reduce their emissions.
- Despite the problem some countries have had in reducing emissions, experts agree that the foremost important factor from an ecosystem perspective is that the international effort to reduce greenhouse gases, regardless of political boundaries and progress toward compliance in specific jurisdictions.
- Thus the carbon market permits a government or business to acquire emissions reductions created elsewhere to achieve its own objectives.
- The goals of the initial agreement were expanded and updated at the Durban climate change Conference in 2011.
- Carbon markets existed under the Kyoto Protocol, that is being replaced by the Paris Agreement in 2020.

How is a Carbon Credit different from a Renewable Energy Certificate?

- Other trading units under Kyoto Protocol – The other units which may be transferred under the scheme, each equal to one tonne of CO2, may be in the form of: A Removal Unit (RMU) on the basis of land use, land-use change and forestry (LULUCF) activities such as reforestation.
- An Emission Reduction Unit (ERU) generated by a joint implementation project.
- A Certified Emission Reduction (CER) generated from a clean development mechanism project activity.
- Transfers and acquisitions of those units are half-tracked and recorded through the register systems below the Kyoto Protocol.
- Internationally Transferred Mitigation Outcomes (ITMO) Internationally Transferred Mitigation Outcomes (ITMO) ar units from the new mechanism for the international emissions trading between Parties to the Paris Agreement.
- General rules during this regard are stipulated in Article 6(2) of the Paris Agreement however details for this mechanism are to be established yet.
- All assets under the Paris Agreement – known as International listed Mitigation Outcomes – ar authorised to be used in another country's NDC ar subject to an adjustment mechanism to make sure that only 1 party takes credit for these reductions.
- Parties have the correct to incorporate the reduction of emissions in the other country as their NDC, as per the system of carbon trading and accounting. One reason for international transfers of mitigation outcomes is that they permit a 'buyer' country to finance lower-cost emissions reductions in another country to fulfill its own commitment while not losing environmental integrity.
- This permits them to be more ambitious.

- It conjointly permits 'seller' countries to finance domestic mitigation beyond what will be achieved with their own resources.

Topic 24. COBALT

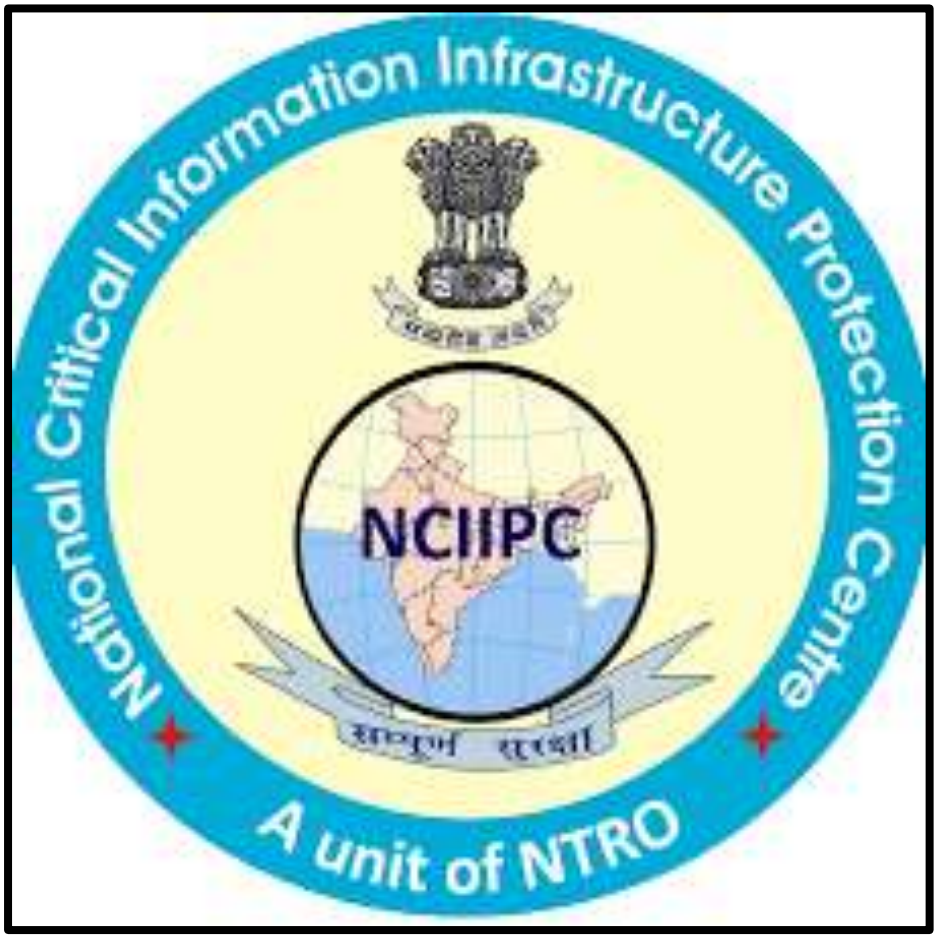
Importance for Prelims: Geography

A Chinese mining conglomerate has bought a stretch of southeast Congo, called Kisanfu and is racing to retrieve its buried treasure: millions of tons of cobalt. This, holds one of the largest and purest untapped reserves of cobalt in the world.

- Cobalt may be a chemical element with the symbol Co and atomic number 27. \
- Like nickel, cobalt is found inside the Earth's crust only throughout a chemically combined kind, save for small deposits found in alloys of natural meteoric iron. The free component, created by subtractive smelting, is a hard, lustrous, silver-grey metal.
- Cobalt makes up only 0.001% of Earth's crust. Most of the Earth's cobalt is in its core.
- It is similar to iron and nickel in its physical properties. it's found in plants and animals, air, water, soil, rocks.
- Cobalt is used in several alloys & super alloys to form elements in aircraft engines, gas turbine, high-speed steels, corrosion resistant alloys, cemented carbides.
- It is also utilized in magnets and magnetic recording media.
- The radioactive isotopes, cobalt-60, is employed in medical treatment and conjointly to irradiate food.
- Cobalt is stable in air and unaffected by water, however is slowly attacked by dilute acids.
- The metal, generally extracted from copper deposits, has traditionally been of secondary interest to miners.
- But demand is ready to explode worldwide because it's utilized in electric car batteries, serving to them run longer while not a charge.

Topic 25. NATIONAL CRITICAL INFORMATION INFRASTRUCTURE PROTECTION CENTRE (NCIIPC)

Importance for Prelims: Security and Defence



PNB server vulnerability may have exposed data of over 180 m customers: CyberX9

- National critical info Infrastructure Protection Centre (NCIIPC) is an organisation of the govt. of India created under the Section 70A of the knowledge Technology Act, 2000 (amended 2008).
- Based in New Delhi, India, it's designated because the National Nodal Agency in terms of critical info Infrastructure Protection. it's a unit of the National Technical research Organisation (NTRO) and so comes under the Prime Minister's workplace (PMO).
- Critical info Infrastructure the data Technology Act, 2000 defines critical

info Infrastructure (CII) as "… those computer resource, the incapacitation or destruction of that, shall have debilitating impact on national security, economy, public health or safety".

- **NCIIPC has broadly known the following as 'Critical Sectors'** :- Power & Energy Banking, monetary Services & Insurance telecommunication Transport Government Strategic & Public Enterprises.