

WEEKLY CURRENT AFFAIRS MAGAZINE for



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

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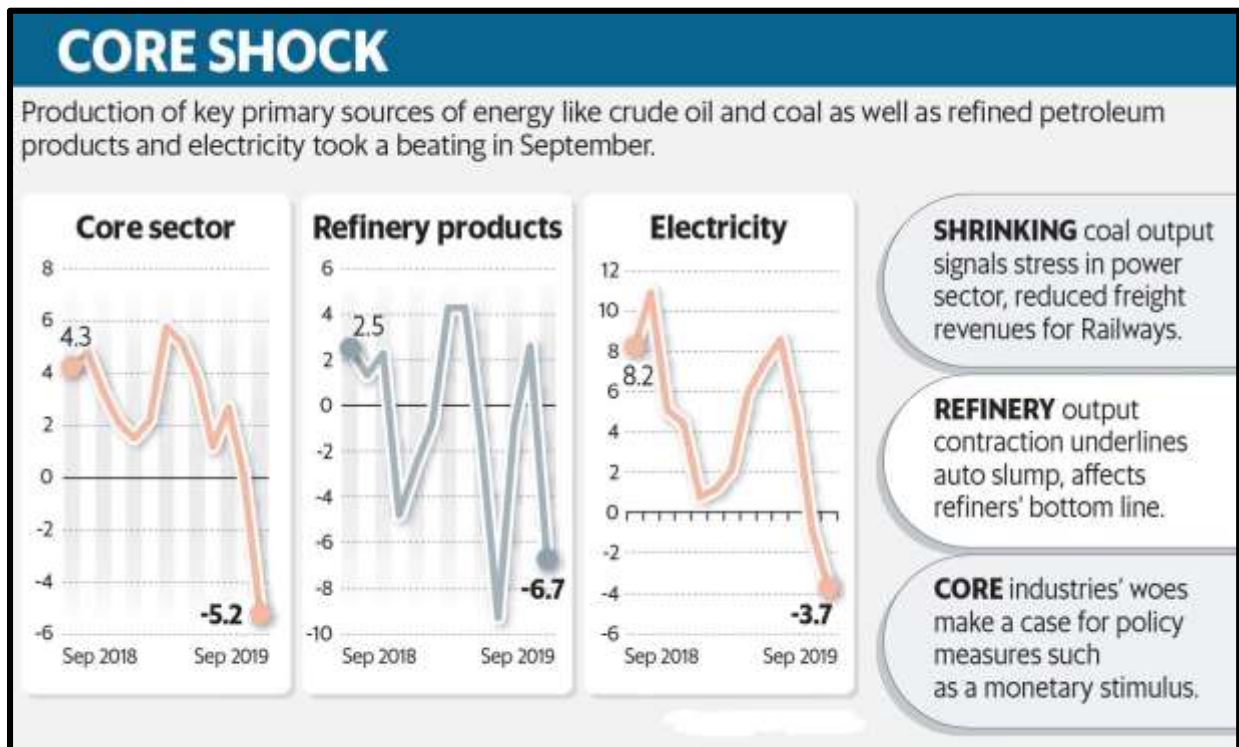
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Success is born of action...

Topic 1: CORE INDUSTRIES OUTPUT FALL

Importance for Prelims: Economics



The output of eight core industries grew 56.1 per cent year-on-year (YoY) in April 2021 on a low-base impact as industrial production was very low within the year-ago month due to a nationwide lockdown.

- However, the commercial output declined 15.1 per cent as compared to March 2021 due to the emergence of second wave of COVID-19 pandemic, with all eight industries registering a decline in output.
- The combined ICI stood at 126.7 in Apr 2021, that raised by 56.1 per cent (provisional) as compared to the Index of Apr 2020. This high rate of growth in Apr 2021 is largely because of low Index base in April 2020 subsequent to the low industrial production across all sectors caused by nationwide lockdown imposed to contain spread of Covid-19 last year.
- The rate of growth of ICI throughout April-March 2020-21 was (-)6.5% (P) as compared to the corresponding period of last FY.

Base Effect

- The base impact refers to the impact of the increase in price index (i.e. last year's inflation) in the previous year over the corresponding rise in worth levels within the current year (i.e., current inflation)
- If the worth index had risen at a high rate within the corresponding amount of the previous year leading to a high rate of inflation, a number of the potential rise is already factored in, therefore the same absolute increase within the price level within the current year can lead to a comparatively lower inflation rates.
- If inflation in June 2016 was 8% and absolute increase in price level in June 2017 was say 11%, then, inflation in June 2017 are low i.e. 1%.
- On the other hand, if the rate of inflation was too low within the corresponding amount of the previous year, even a comparatively smaller rise within the price level can arithmetically give a high rate of current inflation.
- If inflation in June 2016 was one percentage and absolute increase in price level in June 2017 was say four-dimensional, then, inflation in June 2017 are low i.e. 3%.

Core Industries

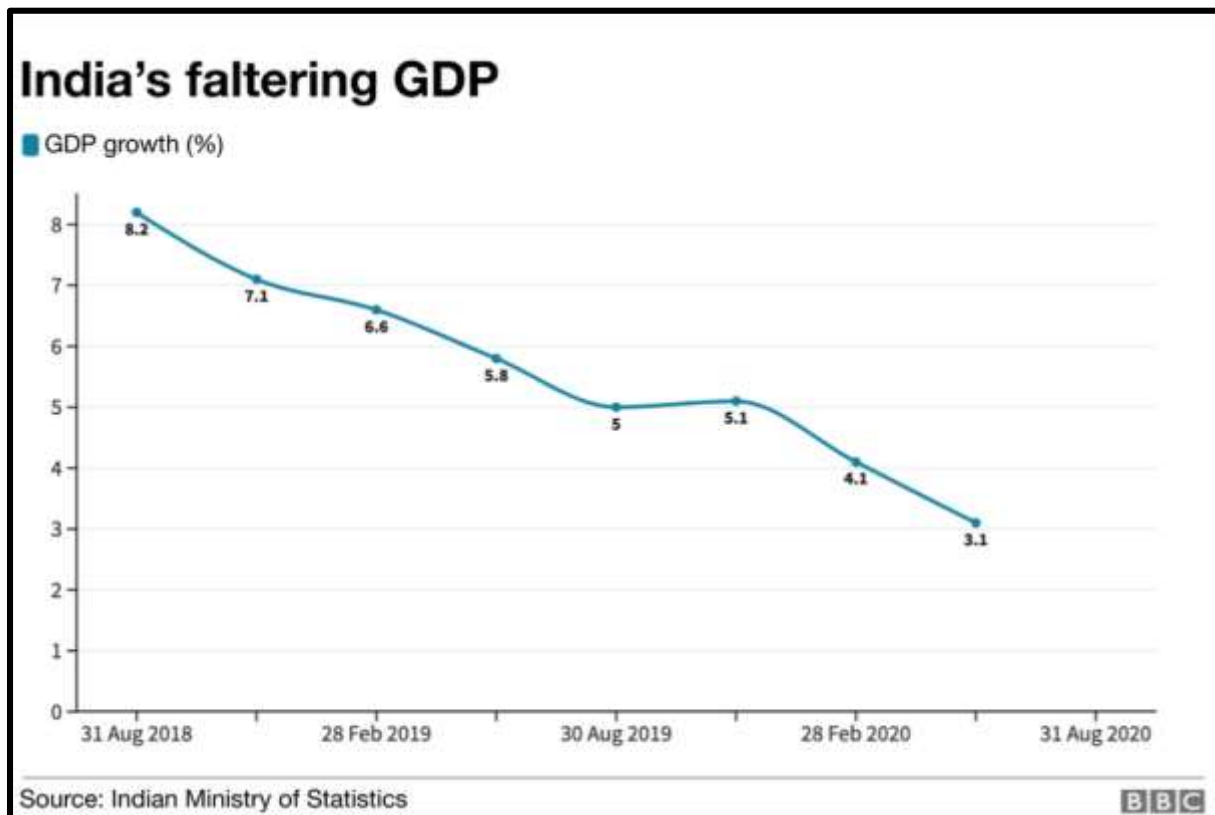
- Core business will be defined because the main trade that has a multiplier factor impact on the economy.
- In most countries, there's specific business that seems to be backbone of all other industries and it qualifies to be the core business.

The Eight Core Industries comprise 40.27% of the load of things enclosed in the Index of industrial Production (IIP).

- The eight Core Industries in decreasing order of their weightage: Refinery Products > Electricity > Steel > Coal > Crude Oil > Natural Gas > Cement > Fertilizers.

Topic 2. INDIA's GDP FALL

Importance for Prelims: Economics



India's Gross Domestic Product (GDP) contracted by 7.3% in 2020-21, as per provisional value estimates discharged by the National statistical workplace. GDP growth in 2019-20, prior to the COVID-19 pandemic, was 4%.

- The Gross value added (GVA) within the economy shrank 6.2% in 2020-21, compared to a 4.1% rise within the previous year.
- Only 2 sectors bucked the trend of negative GVA growth — agriculture, forestry and fishing, that rose 3.6%, and electricity, gas, water system and different utility services (up 1.9%).
- GVA for trade, hotels, transport, communication and broadcasting-related services saw the sharpest decline of 18.2%, followed by construction (-8.6%), mining and quarrying (-8.5%) and producing (-7.2%).

Significance

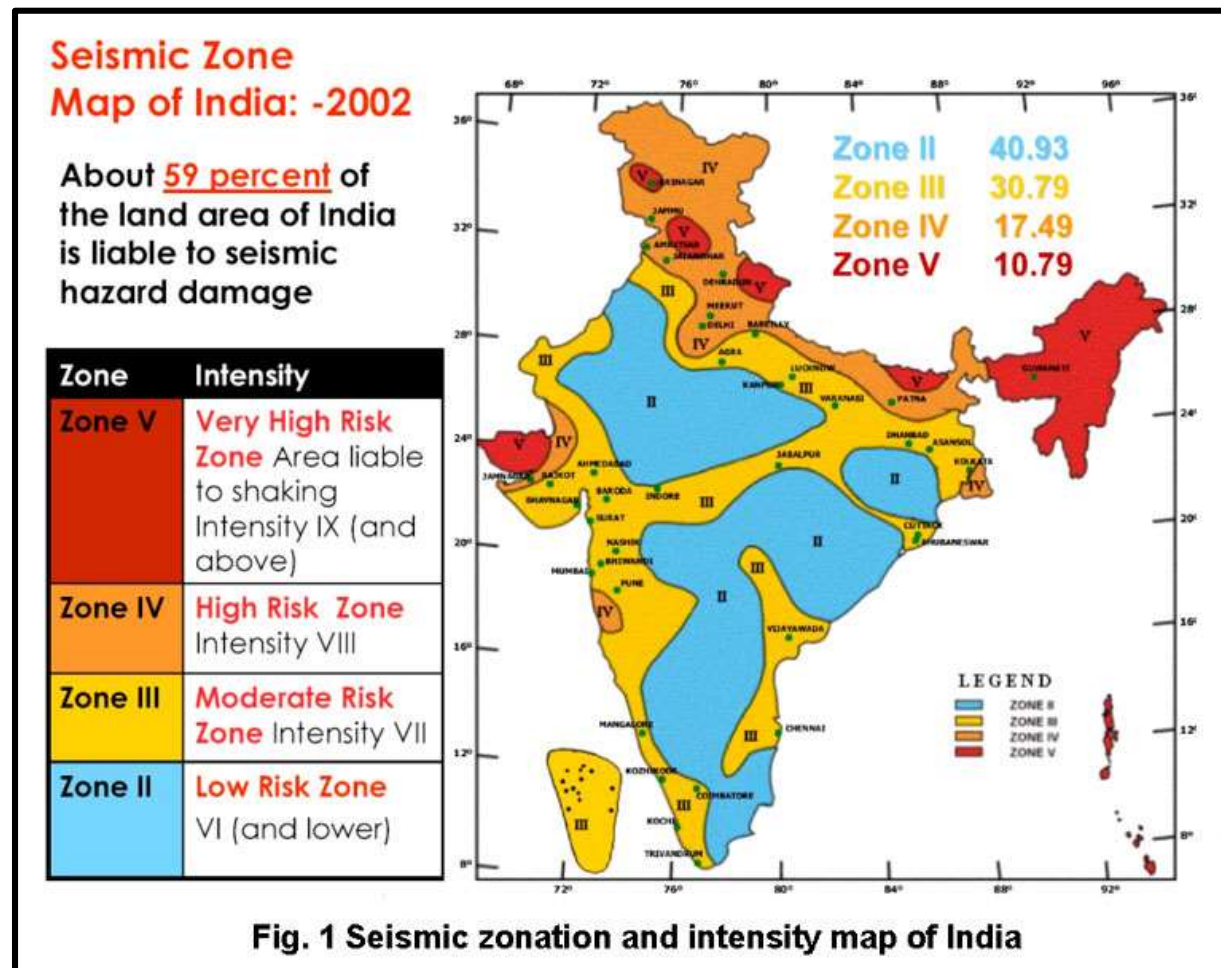
- Though this can be the bleakest performance on record for the economy,

the fourthquarter (Q4) of 2020-21 helped moderate the damage, with a higher-than-expectedgrowth of 1.6% in GDP.

- This marked the second quarter of positive growth once the country entered atechnical recession within the first half of the year.
- GDP had contracted 24.4% in April-June 2020, followed by a 7.4% shrinkage in thesecond quarter. It had return to positive territory within the Sept to Decemberquarter with a marginal 0.5% growth.

Topic 3. EARTHQUAKE ZONES OF INDIA

Importance for Prelims: Geography



Union Minister Hardeep Singh Puri said the development of a new Parliament is important because the previous building was made 100 years ago by the British and wasn't constructed for "an freelance country". It's vital because it's in Seismic Zone two, and if there are strong tremors, it'll come below seismic Zone four.

Seismic Zones in India

- There are four seismic zones (II, III, IV, and V) in India supported by scientific inputs relating to seismicity, earthquakes occurred within the past and tectonic setup of the region.
- Previously, earthquake zones were divided into 5 zones with regard to the severity of the earthquakes; however, the Bureau of Indian Standards

(BIS) classified the country into four seismic zones by unifying the 1st 2 zones.

- BIS is that the official agency for publication the seismic hazard maps and codes.
- **Seismic Zone II:** area with minor harm earthquakes comparable to intensities V to VI of MM scale (MM-Modified Mercalli Intensity scale).
- **Seismic Zone III:** Moderate damage comparable to intensity VII of MM scale.
- **Seismic Zone IV:** Major damage comparable to intensity VII and higher of MM scale.
- **Seismic Zone V:** area determined by pro seismically of sure major fault systems and is seismically the foremost active region.
- Earthquake zone V is that the most vulnerable to earthquakes, wherever traditionally some of the country's most powerful shocks have occurred.
- Earthquakes with magnitudes in excess of 7.0 have occurred in these areas, and have had intensities more than IX.

Seismic Waves, richter scale and mercalli scale

- Seismic waves are the vibrations from earthquakes that travel through the Earth and are recorded on instruments known as seismographs.
- Seismographs record a zigzag trace that shows the varied amplitude of ground oscillations below the instrument.
- The earthquake events are scaled either consistent with the magnitude or intensity of the shock.
- The magnitude scale is known because the richter scale. The magnitude relates to the energy discharged throughout the earthquake that is expressed in absolute numbers, 0-10.
- The intensity scale or mercalli scale takes into consideration the visible damage caused by the event. The range of intensity scale is from 1-12

Topic 4. DRUGS AND COSMETICS ACT

Importance for Prelims: National Legislations

Delhi supreme court on monday pulled up the Drug Controller Department of delhi for not properly examining however BJP MP Gautam Gambhir procured a large quantity of COVID-19 medicines.

- The drugs and Cosmetics Act, 1940 is an act of the Parliament of india which regulates the import, manufacture and distribution of medicine in india.
- The primary objective of the act is to confirm that the medicine and cosmetics sold-out in India are safe, effective and conform to state quality standards

DRUGS AND COSMETICS RULES, 1945

- The medicine and Cosmetics Rules, 1945 are the set of rules under The drugs and Cosmetics Act, 1940.
- It contains provisions for the classification of medicine under given schedules.
- It additionally contains the rules of medicine for their storage, sale, display, and prescription of every schedule.

CENTRAL DRUGS STANDARD CONTROL ORGANIZATION (CDSCO)

- CDSCO is that the National regulatory authority (NRA) of india.
- Its headquarter is in delhi.
- The drugs & Cosmetics Act, 1940 and rules 1945 have entrusted various responsibilities to central & state regulators for the regulation of medicine & cosmetics.
- It envisages the uniform implementation of the Act & Rules for ensuring the security, rights and well-being of the patients.

Under this act, CDSCO is responsible for:

- ✓ Approval of medicine
- ✓ Conduct of Clinical Trials
- ✓ Laying down the standards for medicine
- ✓ Control over the quality of imported medicine within the country
- ✓ Coordination of the activities of State Drug management Organizations
- ✓ Bring out the uniformity within the enforcement of the medicine and Cosmetics Act.

Topic 5. FIRST NANO LIQUID UREA BY IFFCO

Importance for Prelims: Economy



In a declaration, IFFCO said the “World’s first Nano urea Liquid” was unveiled during its fiftieth annual general body meeting.

- IFFCO Nano urea Liquid is developed to exchange typical urea and it will curtail the demand of a similar by a minimum of fifty per cent.
- It contains 40,000 ppm of nitrogen during a five hundred millilitre bottle that is like the impact of nitrogen nutrient provided by one bag of conventional urea.
- The Nano urea Liquid, developed by IFFCO’s scientists and engineers, can be available in five hundred milliliter bottles.
- IFFCO has priced Nano urea at Rs 240 per five hundred milliliter bottle for the farmers, that is 10% cheaper than the value of a bag of conventional urea.

Indian Farmers fertilizer Cooperative restricted (IFFCO)

- IFFCO is massive scale fertilizer cooperative federation in india that is registered as Multistate Cooperative Society.
- It is one among India's biggest cooperative society that is wholly owned by Indian Cooperatives.
- It was based in 1967 with just fifty seven cooperatives and at the present it's amalgamation of over 36,000 Indian Cooperatives with diversified business interests ranging from General Insurance to Rural telecommunication apart from its core business of manufacturing and selling fertilisers.
- It is headquartered in new delhi.

Topic 6. LITORIA MIRA

Importance for Prelims: Environment



Recently, a team of Australian scientists has discovered a curious “chocolatefrog” tree frog i.e. Litoria Mira within the lowland rainforests of latest Guinea.

About Litoria Mira

- It could be a species of frog lives within the rainforests of recent Guinea that appears to be made from chocolate.

- It is impressed by the Latin adjective mirum, which means surprised or strange.
- It stems from the scientist's surprise in discovering an undescribed member of the predominately Australian Litoria genus of tree frogs.
- It includes a well-known relative i.e. the common green tree frog of Australia called Litoria cerulean.
- It is distinguished from all alternative Litoria by its distinctive combination of moderately large size, webbing on hand, comparatively short and robust limbs, and little violet patch of skin on the edge of its eyes.
- The reason that the chocolate frog from new guinea and therefore the Australian green treefrog are similar is that Australia and new guinea used to be joined by land for much of the late tertiary period.
- It was discovered in one in all the world's most unpleasant places for humans i.e. a hot rainforest swamp overspread with malarial mosquitoes, spiky trees and crocodiles and without roads.

Topic 7. WTO TRADE DISTORTING AND PEACE CLAUSE

Importance for Prelims: International Relations

India has invoked the peace clause of the globe Trade Organization forexceeding the ceiling on support it can give farmers for rice for the promoting year 2018-2019, marking the 1st time any country has taken option to this protection.

- India informed the World Trade Organization that the worth of its rice production was \$43.67 billion in 2018-19 which it gave subsidies price \$5 billion.
- The limit is pegged at ten per cent of the worth of food production within the case of India and different developing countries.

Peace Clause under Bali Agreement

- The peace clause protects a developing country's food procurement programmes against action from World Trade Organization members just in case subsidy ceilings are breached.
- As per the original Agreement on agriculture (AoA), the developed and developing countries need to keep their Amber box subsidies among De-minimus level i.e. 5% and ten per cent of their agriculture production in 1986-88 respectively.
- India opposed this base year and limits, because it'd build not possible to implement the food security programs for the poor and MSP for the farmers.
- Therefore, as a measure of temporary relief, Bali summit enacted a "peace clause" for the AoA

Salient features of Peace Clause

- No member, will drag any developing country to Dispute settlement mechanism of WTO.
- For violation of De-minimus limits in AoA provided that the said

developing country is paying subsidies for staple food crops for public stockholding program for food security purpose.

- Is providing annual info of its food security Program to World Trade Organization.
- Permanent answer are taken no later than eleventh ministerial conference i.e. at December 2017.

Topic 8. INDIA'S EFFORT TO FIND A SOLUTION IN WTO FACES CHALLENGE

Importance for Prelims: International Relations

The EU and Cairns cluster opposed the standalone solution pushed by India and other members of G thirty three grouping.

- The G33 (or the buddies of Special product in agriculture) may be a coalition of developing countries, established prior to the 2003 Cancun ministerial conference, that have coordinated throughout the Doha round of World Trade Organization negotiations, specifically in regard to agriculture.
- Dominated by India, the cluster has “defensive” concerns relating to agriculture in relation to World Trade Organization negotiations, and seeks to limit the degree of market opening needed of developing countries.
- When wealthy governments will afford to heavily subsidize their agriculture, predatory dumping will undermine a poorer country's agricultural economy.
- Developing countries aim to balance power through tariffs, so as to manage their own food security, stabilize the livelihoods of their farming populations, and strengthen rural development.
- The cluster has advocated the creation of a “special products” exemption, which would permit developing countries to exempt certain product from tariff reductions, and additionally a “special safeguard mechanism” which might allow tariff will increase in response to import surges.

Topic 9. EIGHTH GLOBAL NITROGEN CONFERENCE FOCUSES ON SDG'S

Importance for Prelims: International Relations



The United Nations (UN) Sustainable Development Goals (SDGs) are the main focus of the eighth triennial conference of the International Nitrogen Initiative (INI) being held effectively from May 31-June 3, 2021.

- The International Nitrogen Initiative (INI) is a world program, set up in 2003 under promotion of the Scientific Committee on Issues of the Environment (SCOPE) and from the International Geosphere-Biosphere Program (IGBP).

The key aims of the INI are to:

- Optimize nitrogen's advantageous role in sustainable food production,

and Minimize nitrogen's negative effects on human health and therefore the atmosphere resulting from food and energy production.

- The program is presently a sustained partner of Future Earth.

INI Conferences

- The INI holds a conference each 3 years, inviting members of the international nitrogen community to meet up and discuss ideas and exchange information on nitrogen problems. The last INI conference was held in Melbourne, in Dec 2016.

Topic 10. NAGALAND BAMBOO FINDS HOME IN KERALA

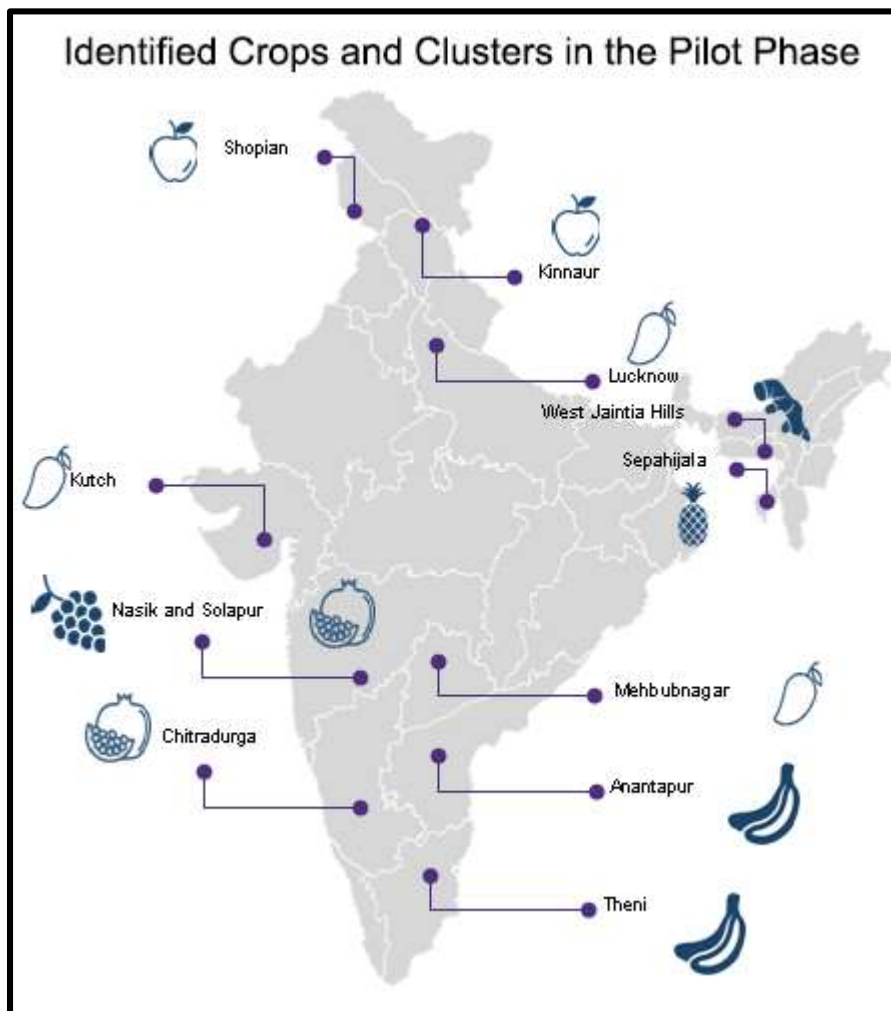
Importance for Prelims: Environment

A rare bamboo from Nagaland in northeast India has found a second home in picturesque Wagamon in Idukki district of Kerala, courtesy a conservation programme of the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI).

- In its efforts to conserve the species, JNTBGRI has also heeded the United Nations call for ecosystem restoration, he said.
- JNTBGRI has plans to propagate the bamboo species in Kerala, given its soil binding abilities.
- Chimonobambusa callosa, an eastern Himalayan hill bamboo, can grow to a height of five to 10 metres. A long-rhizomed spreading bamboo, Chimonobambusa callosa is ideal for soil protection.
- Characterised by straight, green culms, with rings of thorns adorning the nodes, the bamboo also has ornamental value, according to the botanic garden.

Topic 11. HORTICULTURE CLUSTER DEVELOPMENT PROGRAMME (CDP)

Importance for Prelims: Government Schemes



To ensure holistic growth of gardening, Union Minister of Agriculture launched the agriculture Cluster Development Programme (CDP).

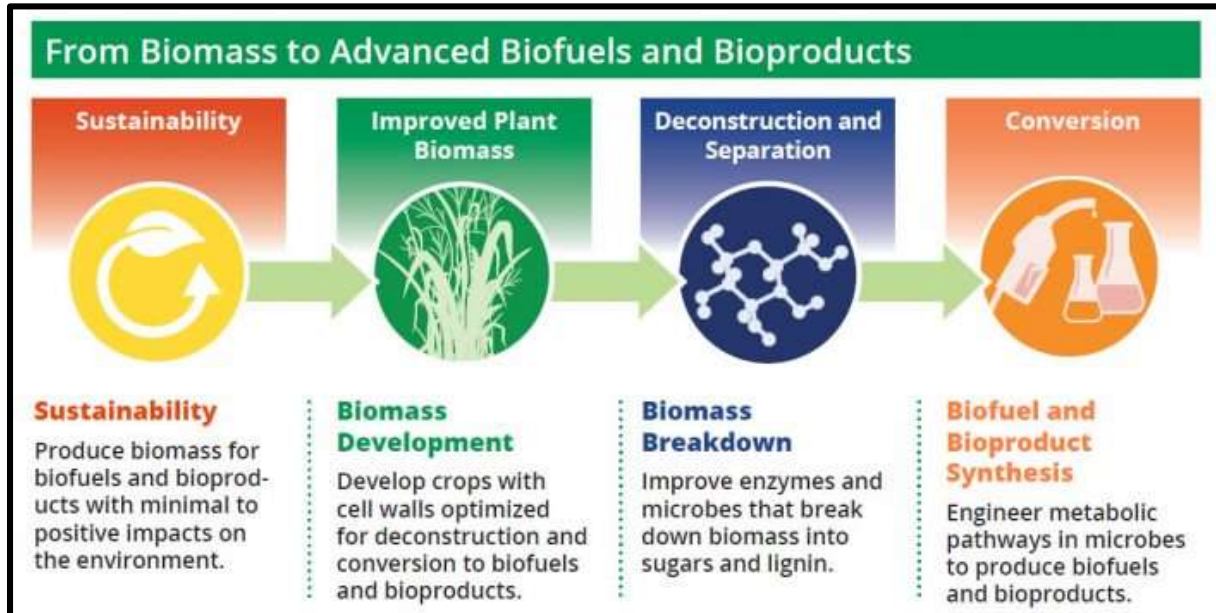
- In a pilot phase, the programme are implemented in twelve agriculture clusters covering eleven States/UTs out of the whole fifty three clusters selected for the programme.
- It may be a central sector programme.
- It are implemented by the National gardening Board (NHB) of the Ministry of Agriculture and Farmers' Welfare.
- The programme aims at growing and developing identified gardening

clusters to make them globally competitive.

- The programme can benefit concerning ten lakh farmers and is expected to attract an investment of Rs. 10,000 crore once implemented all told the fifty three clusters
- The programme can address all major problems related to the Indian gardening sector including pre-production, production, post-harvest management, logistics, marketing and branding.

Topic 12. SUSTAINABLE ALTERNATIVE TOWARDS AFFORDABLE TRANSPORTATION

Importance for Prelims: Government Schemes



Recently, the Union Minister of crude oil and fossil fuel & Steel presided over a virtual ceremony during which variety of initiatives were launched to produce major fillip to the SATAT initiative.

- A Cooperation Agreement was signed by Oil and Gas majors together with Indian Oil, HPCL, BPCL, GAIL and IGL, for the promotion and development of the SATAT.
- The Cooperation agreement provides for establishing a powerful network for marketing the complete created quantity of CBG Plants through varied channels.

SATAT scheme

- It was launched in 2018 by the Ministry of crude oil & natural gas in association with Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd. and Hindustan Petroleum Corporation Ltd.
- It envisages targeting production of fifteen MMT of CBG from 5000 plants by 2023.
- It aims to set up Compressed Bio-Gas production plants and create CBG accessible in the marketplace for use as a green fuel.

Compressed Bio-Gas (CBG)

- Bio-gas is made naturally (through a method of anaerobic decomposition) from waste / bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc.
- After purification, it's compressed and known as CBG, that has high methane content.
- It is exactly like the commercially accessible fossil fuel in its composition and energy potential.
- It will be used as an alternate, renewable automotive fuel with similar calorific value and alternative properties just like CNG.

Topic 13. PRODUCTION LINKED INCENTIVE (PLI) SCHEME OF PHARMACEUTICALS

Importance for Prelims: Government Schemes



Production Linked Incentive Scheme (PLI) for Large Scale Electronics Manufacturing

- Incentive:** 4% to 6% on incremental sales (over base year) of goods manufactured in India
- Target Segments:** Mobile phones and specified electronic components
- Eligibility:** Subject to thresholds of incremental investment and incremental sales of manufactured goods
- Tenure of the Scheme:** Five years subsequent to the base year as defined (FY19-20)

Government of India issued Operational guidelines for Production Linked Incentive plan of pharmaceuticals. The scheme is currently open to applications from the industry.

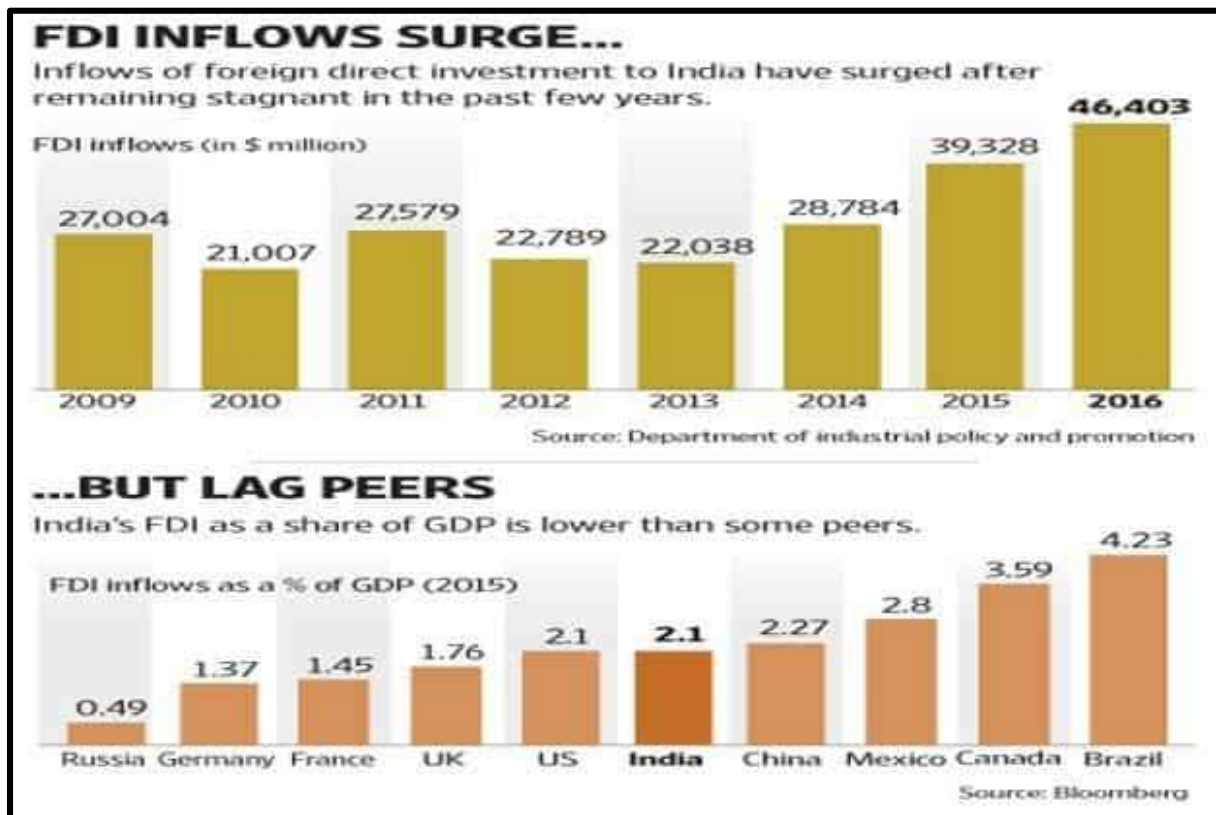
- With an aim to enhance India's producing capabilities by increasing investment and production within the sector and to contribute to product diversification to high value goods within the pharmaceutical sector,

Department of pharmaceuticals notified the 'Production linked Incentive (PLI) scheme for Pharmaceuticals' third March, 2021.

- The approved outlay of the plan is Rs 15000 crore.
- The applications are invited in 3 groups based on the world Manufacturing Revenue of FY 2019-20 of the candidates. A special carve out for MSMEs has been kept under the scheme.
- All the applications are submitted through an on-line portal maintained by SIDBI, the Project Management Agency for the scheme.
- The eligible products are classified into 3 categories. The products covered under the scheme are formulations, biopharmaceuticals, active pharmaceutical ingredients, key beginning material, drug intermediates, in-vitro diagnostic medical devices, etc.
- The category-1 and category-2 products attract ten per cent incentive and category-3 products attract five per cent incentive on the progressive sales. progressive sales of a product mean sales of that product during a year over and higher than the sales of that product in FY 2019-2020.

Topic 14. SURGE IN FDI INFLOWS

Importance for Prelims: Economy



Recently, the Ministry of Commerce & business has declared that in a pandemic-ravaged year, India managed to rake in the highest ever foreign direct investment throughout financial year 2020-21 at \$81.72 billion.

- Singapore was the largest capitalist in India last financial year, accounting for twenty nine per cent FDI, followed by the US at twenty three per cent and Mauritius at nine per cent.
- The United States and United Kingdom reportable 227 per cent and forty four per cent year-on-year increase in FDI in India throughout FY21.
- Out of top ten countries, Saudi Arabia was the top capitalist in terms of percentage increase throughout FY21.
- It invested with \$2,816.08 million compared to \$89.93 million reportable in the previous financial year.
- Among states, Gujarat received the highest FDI at thirty seven per cent of

the whole equity inflows.

- Maharashtra and karnataka had the second and third highest flow at twenty seven per cent and thirteen per cent, severally.
- The computer software system and hardware segment received the foremost FDI in FY21, accounting for forty four per cent of total FDI equity influx.

Significance of increase in FDI inflows

- It reflects the confidence of international investors in india's market as FDI inflows play a very important role as India faces huge infrastructure funding needs to boost growth.

Increased Employment and Economic Growth:

- The increased FDI boosts the manufacturing also because the services sector that in turn creates jobs, and helps reduce state among the educated youth.

Human Resource Development:

- The skills gained and increased through training and experience boost the education and human capital quotient of the country.

Development of Backward Areas:

- The FDI allows the transformation of backward areas during a country into industrial centres that in turn provides a lift to the social economy of the area.

Provision of Finance & Technology:

- The introduction of newer, enhanced technologies and processes results in their diffusion into the native economy, resulting in increased efficiency and effectiveness of the business.

Increase in Exports:

- The creation of 100 percent Export orientated Units and Economic Zones have more assisted FDI investors in boosting their exports from

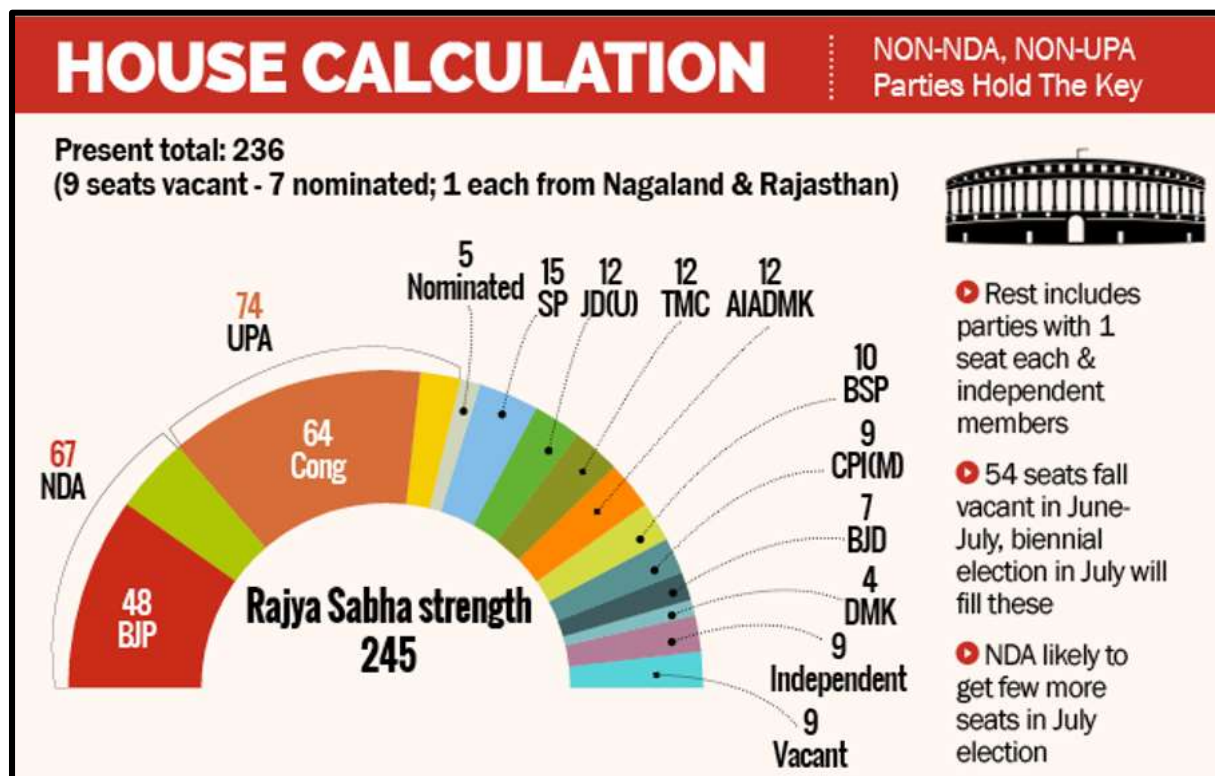
other countries.

Exchange Rate Stability:

- The constant flow of FDI into a state interpret into a continuous flow of foreign exchange that helps the country's Central Bank maintain a comfortable reserve of foreign exchange.

Topic 15. NOMINATION OF MEMBERS FOR RAJYA SABHA SEAT

Importance for Prelims: Polity



After an unsuccessful contest for a seat within the west bengal Assembly, SwapanDasgupta, who had resigned from his nominative membership of the Rajya Sabha to fight the elections on a BJP ticket, was tuesday re-nominated to the higher House.

Nominated members in RS

- Article 80(1)(a) of Constitution of India makes provision for the nomination of 12 members to the Rajya Sabha by the President of India in accordance with provisions of Arts. 80(3).
- Article 80(3) says that the persons to be nominative as members should be possessing special information or practical experience in respect of such matters as the following specifically : Literature, science, art and welfare work.
- As per the Fourth Schedule to the Constitution of India on twenty six Jan 1950, the Rajya Sabha was to carry with it 216 members of that twelve

members were to benominated by the President and also the remaining 204 elective to represent the States.

- The present strength, however, is 245 members of whom 233 are representatives of the states and union territories and twelve are nominative by the President.
- The Rajya Sabha isn't subject to dissolution; one-third of its members retire every second year.
- The twelve nominative members of the Rajya Sabha are persons who are eminent in particular fields, and area unit well known contributors within the specific field.
- The nominative members are usually amongst persons having special information or practical experience in literature, science, art and welfare work.

Topic 16. J&K MUFTI WHO TRANSLATED QURAN TO GOJRI DIES

Importance for Prelims: Culture

Mufti Faiz-ul-Waheed, a renowned islamic scholar who was the 1st to translate the quran into the Gojri language and helped 100 of tribal students pursue medical and engineering education across Jammu and kashmir, died of post-Covid.

- Spoken by the Gujjars and Bakerwals of J&K, Gojri, that isn't taught in school, continues to be marginal even though its speakers are the third largest ethnic group in the state when the Kashmiris and also the Dogras.
- Gujjars and Bakerwals are the third largest ethnic group once the Kashmiris and the Dogras.
- About twenty per cent of the overall population of 1.25 crore speak Gojri, which, along with 38 languages in india, clamours for inclusion into the eighth Schedule of the Constitution.
- The government of india is obligated to develop an eighth Schedule language so “it grows quickly in richness and becomes effective means that of communication modern knowledge”.

Gujjars

- Gujjar Tribe is found in india, Pakistan, and afghanistan.
- Although historically they need been concerned in agriculture (most famously, dairy and livestock farming).
- Gurjars are a large heterogeneous cluster that's internally differentiated in terms of culture, religion, occupation, and socio-economic status.
- They diversely follow Hinduism, Islam, and sikhism.
- Gurjars are lingually and religiously various.
- Although they're able to speak the language of the region and country wherever they live, Gurjars have their own language, called Gujar.
- The communities have conjointly developed fluency in alternative

languages like Punjabi, Urdu, Hindi, Pastho, Pahari languages like Kangri and Dogri.

- The Gujjar are an endogamous community however observe exogamy at the clan and, often, village levels.

Bakarwal

- The Bakarwal (also Bakharwal, Bakrawallah and Bakerwal) are a mostly Muslim nomadic tribe based mostly within the Pir Panjal and Himalayan mountains of South Asia.
- They are historically, and still in the main, goatherds and shepherds.
- They reside within the entire Kashmir region between India and Pakistan, and in the Nuristan province of Afghanistan.

Topic 17. RDSO BECOMES FIRST INSTITUTION TO BE DECLARED AS SDO UNDER ONENATION ONE STANDARD MISSION

Importance for Prelims: Government Schemes



Railways Embarks on Mission

'One Nation One Standard' of

Bureau of Indian Standards

Research Designs & Standards Organisation set to be the first Standard Developing Organisation

- Help standardise products & processes
- Template for research & global standards across sectors
- Efficient development & on ground transition of standards

Recently, the analysis style & Standards Organization (RDSO) of Indian Railways has become the primary institution to be declared SDO (Standard Developing Organization) under “One Nation One Standard” mission.

One Nation One standard Mission

- It may be a scheme that provides for “Recognition of SDO”.
- It is an inventiveness of Bureau of Indian Standards (BIS).

- It is envisioned on the line of ‘one nation one ration card’ so as to confirm quality products in india.

Significance of 1 Nation One standard Mission

- It aims at aggregating and integration the existing capabilities and dedicated domain specific expertise accessible with varied organizations within the country engaged in standards development.
- It can enable convergence of all standard development activities within the country resulting in “One National standard for One Subject”.
- It aims to usher in a lot of quicker transition from development of technology & innovation stage to actual use on ground.
- It aims to create india the leader in setting international benchmarks in setting standards.

About Bureau of Indian Standards (BIS)

- It is that the National standard Body of india established under the BIS Act 2016.
- It came into existing, through an act of assembly, in 1987.
- It is established for the harmonious development of the activities of standardization and marking and quality certification of products.

Topic 18. PALESTINE QUESTIONS INDIA'S SILENCE AT UNHRC

Importance for Prelims: International Organizations

Palestine has conveyed its disappointment once India abstained from voting at the UN Human Rights Council (UNHRC) on a resolution against Israel.

About UNHRC

- The Human Rights Council is an inter-governmental body among the UN system chargeable for strengthening the promotion and protection of human rights round the world.
- The Council was created by the UN General Assembly in 2006. It replaced the previous UN Commission on Human Rights.
- The workplace of the high commissioner for Human Rights (OHCHR) is the Secretariat of the Human Rights Council.
- OHCHR is headquartered in Geneva, Switzerland.

Members:

- It is created from forty seven UN Member States that are elective by the United Nations
- General Assembly (UNGA).
- The UNGA takes into consideration the candidate States' contribution to the promotion and protection of human rights, also as their voluntary pledges and commitments during this regard.
- The Council's Membership is based on equitable geographical distribution.

Seats are distributed as follows:

- ✓ African States: thirteen seats
- ✓ Asia-Pacific States: thirteen seats
- ✓ Latin American and Caribbean States: eight seats
- ✓ Western European and other States: seven seats
- ✓ Eastern European States: six seats

- Members of the Council serve for a period of 3 years and aren't eligible for immediate re-election when serving 2 consecutive terms.

Procedures and Mechanisms:

- Universal Periodic Review: UPR serves to assess the human rights things altogether UN Member States.
- Advisory Committee: It is the Council's "think tank" providing it with expertise and recommendation on thematic human rights problems.
- Complaint Procedure: It permits people and organizations to bring human rights violations to the eye of the Council.
- UN Special Procedures: These are created from special rapporteurs, special representatives, and freelance specialists and working teams that monitor, examine, advise and publically report on thematic problems or human rights things in specific countries.

Topic 19. PM ASKS TO HAVE A 'ZERO HOUR' IN CABINET

Importance for Prelims: Polity

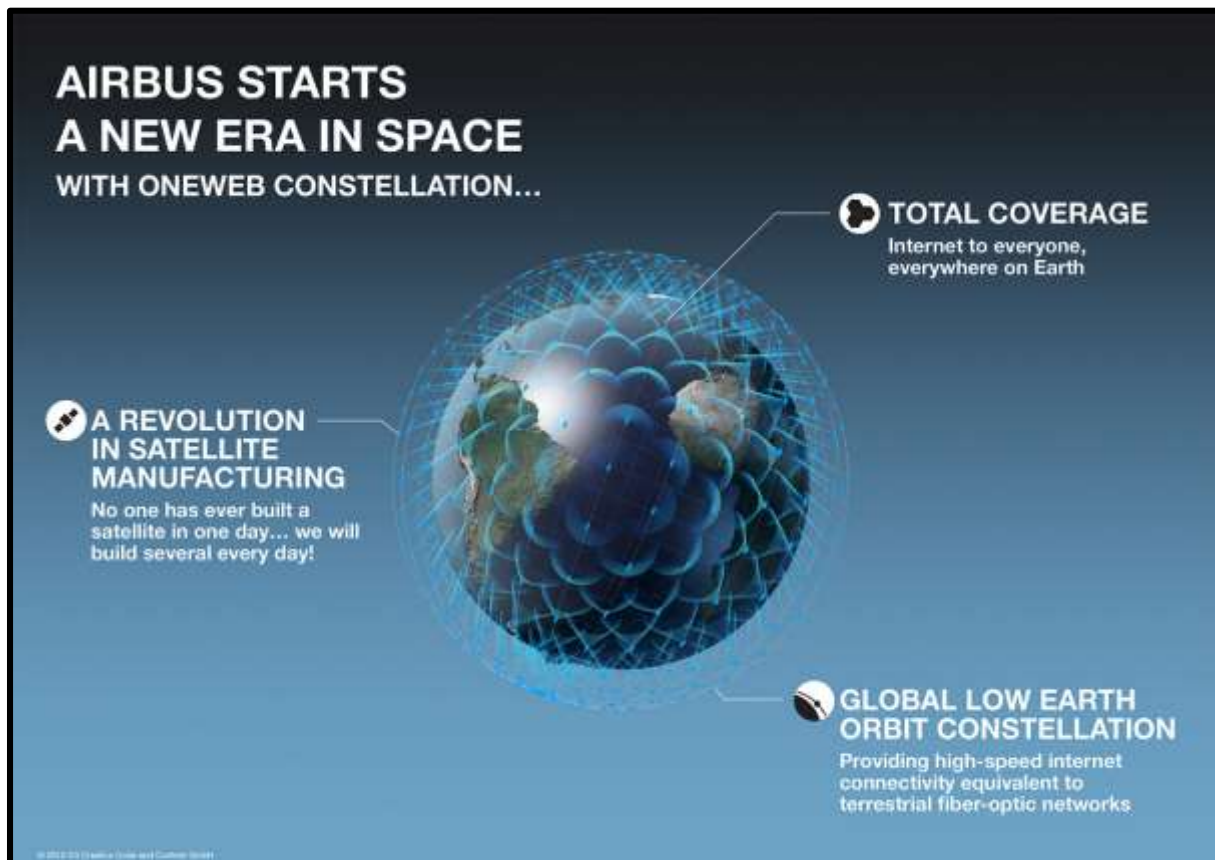
PM told me to have 'Zero Hour' in cupboard to listen to negative feedback:

Himanta Biswa Sarma.

- Zero Hour is an Indian revolution within the field of parliamentary procedures and has been in living since 1962.
- Zero Hour is that the time once Members of Parliament (MPs) will raise problems of Urgent Public Importance.
- For raising matters throughout the zero hour, MPs should provide the notice before ten am to the Speaker/ Chairman on the day of the sitting.
- The notice should state the topic they wish to raise within the House. However,
- Speaker, Lok Sabha / Chairman, Rajya Sabha could permit or decline a Member to lift a matter of importance.
- 'Zero Hour' isn't mentioned within the Rules of Procedure. Thus, it's an informal device obtainable to MPs to lift matters with none notice ten days in before.
- The zero hour starts at twelve noon immediately following the Question Hour.

Topic 20. LEO TECHNOLOGY: INTERNET FROM SKY

Importance for Prelims: Science & technology



Following the successful launch of thirty six satellites on night twenty eight, OneWeb's Low Earth Orbit (LEO) constellation reached 218 in-orbit satellites.

- The company solely has an additional launch to complete before it obtains the capability to modify its 'Five to 50' service of providing web connectivity to all regions north of fifty degrees latitude.

What is OneWeb?

- OneWeb could be a world communications company that aims to deliver broadband satellite net round the world through its fleet of LEO satellites.
- In 2010, the corporate declared bankruptcy however was ready to resume operations following an inflow of investment from a consortium consisting of the UK Government, Hughes Communication, Sunil Mittal's Bharti world restricted, SoftBank and Eutelsat, a leading European

satellite operator.

LEO technology

- LEO satellites are orbiting the earth since the Nineteen Nineties, providing corporations and people with varied communication services
- LEO satellites are positioned around 500km-2000km from earth, compared to stationary orbit satellites that are approximately thirty six,000km away.
- Latency, or the time required for information to be sent and received, is contingent on proximity.
- As LEO satellites orbit nearer to the world, they're able to give stronger signals and quicker speeds than traditional fixed-satellite systems.
- Additionally, because signals travel quicker through space than through fibre-optic cables, they even have the potential to rival if not exceed existing ground-based networks.
- However, LEO satellites travel at a speed of 27,000 kilometers per hour and complete a full circuit of the earth in 90-120 minutes. As a result, individual satellites will solely build direct contact with a land transmitter for a short period of time so requiring massive LEO satellite fleets and consequently, a significant capital investment.
- Due to those prices, of the 3 mediums of net – fibre, spectrum and satellite – the latter is that the most costly.
- Therefore, LEO satellite broadband is only desirable in areas that can't be reached by fibre and spectrum services. OneWeb's target market can thus be rural populations and military units in operation far from urban areas.

Topic 21. RISING OIL PRICES & OPEC+

Importance for Prelims: International Relations

Crude oil costs have hit a 2 year high with brant goose crude rising higher than the \$71 per barrel mark on wednesday hit the highest level since could 2019 as key oil manufacturing countries declared that they'd adhere to plans entailing a gradual increase in petroleum production.

- The Organisation of crude oil exporting Countries extended provide cuts created in 2020 once petroleum costs had reached a low of under \$19 per barrel through the 1st 5 months of 2021

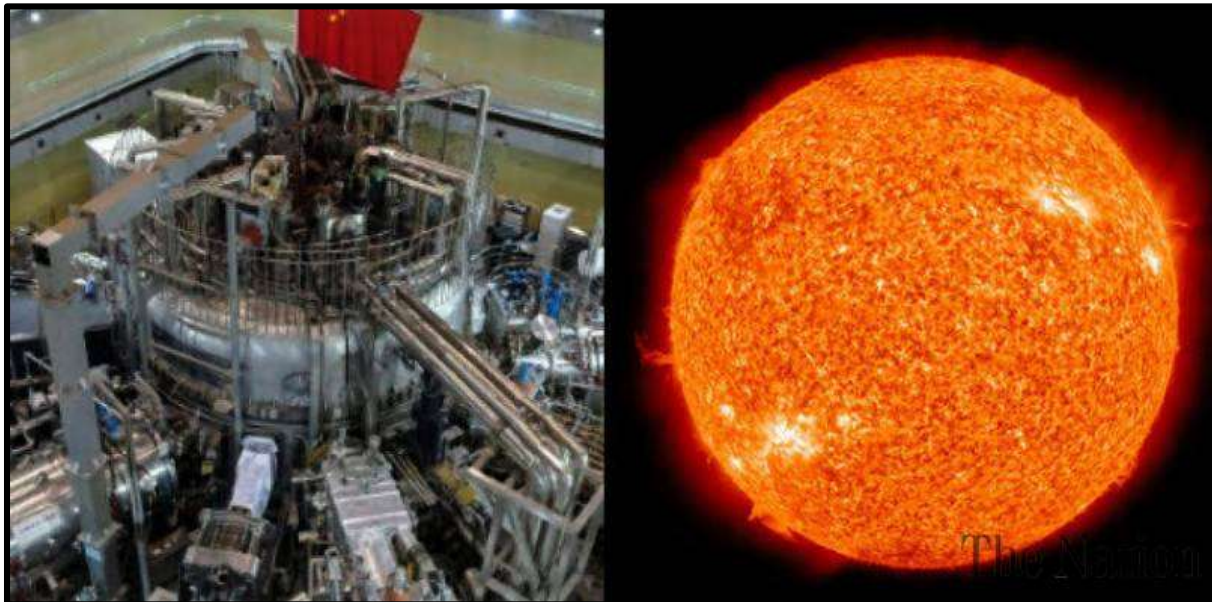
OPEC

- The Organization of the petroleum exporting Countries (OPEC) was supported in Baghdad, Iraq, with the signing of an agreement in Sep 1960 by five countries specifically monotheism Republic of iran, Iraq, Kuwait, saudi arabia and Venezuela.
- They were to become the Founder members of the establishment.
- As of 2020, Organization of Petroleum-Exporting Countries includes a total of thirteen Member Countries viz. Iran, Iraq, Kuwait, United Arab Emirates (UAE), Saudi Arabia, Algeria, Libya, Nigeria, Gabon, equatorial guinea, Republic of Congo, angola and venezuela are members of Organization of Petroleum-Exporting Countries.
- OPEC's objective is to co-ordinate and unifies petroleum policies among member Countries, so as to secure fair and stable costs for crude oil producers; an efficient, economic and regular provide of crude oil to consuming nations; and a fair return on capital to those investing within the business.
- It is head quartered in vienna, Austria.
- OPEC membership is open to any country that's a substantial exporter of oil and that shares the ideals of the organization.

- OPEC + PEC+ is that the alliance of crude producers undertaking corrections in provide within the oilmarkets since 2017.
- OPEC and countries include azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan. (OPEC, As of 2020, Organization of Petroleum-Exporting Countries includes a total of thirteen Member Countries viz. Iran, Iraq, Kuwait, United Arab Emirates (UAE), Saudi Arabia, Algeria, Libya, Nigeria, Gabon, equatorial guinea, Republic of Congo, angola and venezuela are members of Organization of Petroleum-Exporting Countries.)

Topic 22. CHINA'S ARTIFICIAL SUN EXPERIMENTAL FUSION REACTOR

Importance for Prelims: Science & tech



For twenty seconds, China's 'artificial sun' EAST achieved a peak temperature of 288 million degrees fahrenheit, that is over 10 times hotter than the sun

- China's Experimental Advanced Superconducting tokamak (EAST), that mimics the energy generation method of the sun, set a new record when it ran at 216 million degrees fahrenheit (120 million degrees Celsius) for one hundred and one seconds, in keeping with state media.
- For another twenty seconds, the "artificial sun" conjointly achieved a peak temperature of 288million degrees fahrenheit (160 million degrees Celsius), that is over 10 times hotter than the sun.

Artificial Sun

- The HL-2M tokamak reactor is China's largest and most advanced nuclear fusion experimental analysis device, and scientists hope that the device will potentially unlock a strong clean energy source.
- HL-2M tokamak device is used in it to duplicate the nuclear fusion method that occurs naturally within the sun.

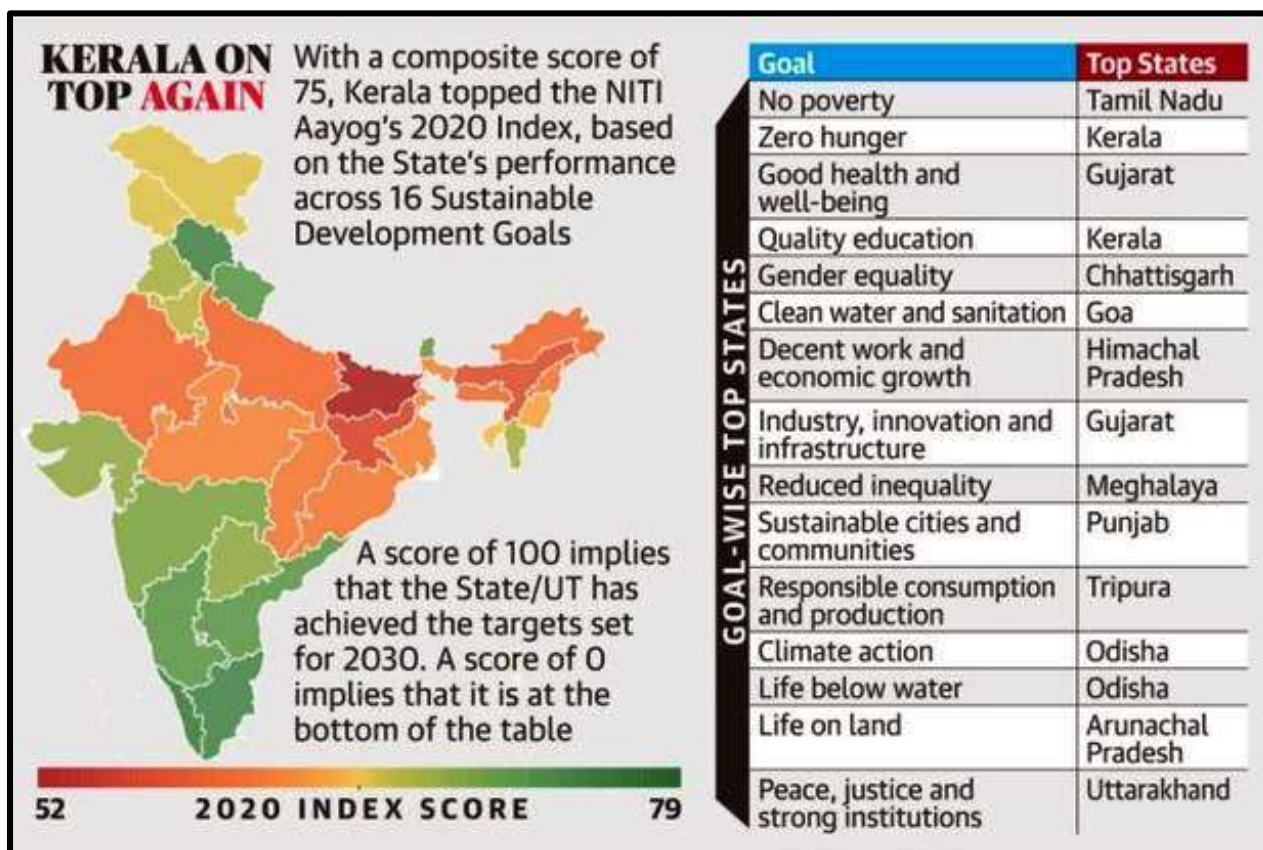
- It uses a strong magnetic field to fuse hot plasma and may reach temperatures of over one hundred fifty million degrees celsius, approximately 10 times hotter than the core of the sun.
- Located in sichuan province, the reactor is usually known as an “artificial sun” on account of the enormous heat and power it produces.

Nuclear Fusion:

- Nuclear Fusion is outlined because the combining of 2 lighter nuclei into a heavier one.
- Such nuclear fusion reactions are the supply of energy within the Sun and different stars.
- It takes considerable energy to force the nuclei to fuse. The conditions required for this method are extreme millions of degrees of temperature and countless pascals of pressure.
- The hydrogen bomb is based on a thermonuclear fusion reaction. However, a nuclear bomb supported the fission of uranium or plutonium is placed at the core of the hydrogen bomb to supply initial energy.

Topic 23. NITI AYOOG RELEASED THIRD EDITION OF SDG INDIA INDEX

Importance for Prelims: Governance



Recently, the NITI Aayog has discharged the third edition of SDG India Index & Dashboard 2020-21.

- About SDG India Index
- It was 1st launched in 2018.
- It advised and developed by NITI Aayog.
- The preparation of the index followed extensive consultations with the first stakeholders i.e. the States and Union Territories, the United Nations agencies in India, Ministry of Statistics and Programme Implementation (MoSPI), and therefore the key Union Ministries.
- It has been comprehensively documenting and ranking the progress created by States and Union Territories towards achieving the sustainable

Development Goals.

- It has become the first tool for observation progress on the SDGs within the country and has simultaneously fostered competition among the States and Union Territories.
- It remainder a rare data-driven inventiveness to rank our States and Union Territories by computing a composite index on the SDGs.
- The States and Union Territories are classified as below supported their SDG india

Index score:

- Aspirant: 0–49 , Performer: 50–64 , Front-Runner: 65–99 , Achiever: one hundred.
- Overall results and findings of SDG india Index 2020-21 The country's overall SDG score has improved by six points i.e. from sixty in 2019 to sixty six in 2020–21.
- The positive stride towards achieving the targets is largely driven by exemplary country-wide performance in Goal six (Clean Water and Sanitation) and Goal 7 (Affordable and Clean Energy).
- Mizoram, Haryana, and Uttarakhand are the overhead gainers in 2020–21 in terms of appropriately in score from 2019, with a rise of twelve, ten and eight points, respectively.
- Kerala has retained the highest rank in Niti Aayog's SDG india Index 2020-21, while Bihar has been adjudged because the worst performer.
- Both Himachal Pradesh and tamil nadu took the second spot with a score of seventy four.
- Bihar, Jharkhand and assam were the worst performing states during this year's india index.

Topic 24. CABINET APPROVES MODEL TENANCY ACT

Importance for Prelims: Legislations

The Union cupboard has approved the Model tenancy Act for circulation to all States / Union Territories for adaptation by method of enacting recent legislation or amending existing rental laws suitably. it'll facilitate overhaul the legal framework with reference to rental housing across the country.

- Salient options of the act:
- The government had 1st discharged the draft of the MTA in 2019. The Act aims to bridge the trust deficit connecting tenants and landholder by clearly delineating their commitment.
- Besides, The Act is expected to give a fillip to non-public participation in rental housing as a business model for addressing the large housing shortage.
- The Model tenancy Act can give a model for urban and rural properties, also as a templet for residential and business properties.
- In case of dispute between landowner and tenant, a rent authority, or a rent court would be accessible for quick resolution.
- A tenant can have to submit a security deposit of 2 months for residential premises. For business property, a tenant can have to pay six-month rent.
- The tenant cannot sublet a part of or the entire property to somebody else.
- If the tenant fails to vacate the premises on the expiration of the period of occupancy or termination of residency, the owner is entitled to double the monthly rent for 2 months and 4 times afterward.
- The landholder would provides a notice in writing 3 months before revising rent. the owner cannot hike the rent within the middle of the tenure.

Topic 25. SHANGHAI COOPERATION ORGANISATION (SCO)

Importance for Prelims: International Organisations



The Union cabinet of India has approved the ratification of an Agreement on “Cooperation among the field of Mass Media” between all the Member States of Shanghai Cooperation Organisation. The Agreement was signed in June, 2019.

- The SCO might be a permanent intergovernmental international organisation. It's a Eurasian political, economic, and security alliance and has been the primary security pillar of the region.
- It was established in 2001. It had been preceded by the Shanghai five mechanism.
- The Heads of State Council (HSC) is that the supreme decision-making body in the SCO.
- It meets once a year and adopts decisions and guidelines on all

important matters of the organisation.

The organisation has two permanent bodies:

- The SCO Secretariat primarily based in Beijing.
- The govt Committee of the Regional Anti-Terrorist Structure (RATS) based mostly in Tashkent.
- Eight member states: India, Kazakhstan, China, Kyrgyzstan, Pakistan, Russia, Tajikistan and Uzbekistan.
- Four observer states: Afghanistan, Belarus, Iran and Mongolia.

Topic 26. DAC CLEARS BUILDING OF 6 ATTACK SUBMARINES

Importance for Prelims: Defence

Recently, the Defence Acquisition Council (DAC) has approved proposals concerning Capital Acquisitions of various instrumentation for modernization and operational needs of the armed forces amounting to approx. Rs 6,000 crore.

- The DAC conjointly approved issue of RFP for construction of six Conventional Submarines beneath Project P seventy five (I) under the Strategic Partnership (SP) Model.
- The project envisages indigenous construction of six conventional submarines equipped with the state-of-the-art Air freelance propulsion system at an estimated value of Rs 43,000 crore.
- It is being the 1st case processed under the Strategic Partnership model which would be one among the biggest 'Make in India' projects.

Strategic Partnership model

- Strategic Partnership model aims to revitalize defence industrial ecosystem and progressively build indigenous capabilities within the personal sector to style, develop and manufacture complex weapon system for future wants of armed forces.
- The SP model has four segments — submarines, single-engine fighter aircraft, helicopters and armoured carriers/main battle tanks — which might be specifically opened up for the personal sector.
- Under this policy, one indian non-public company would be selected in every segment which would tie-up with shortlisted world instrumentation makers to manufacture the platforms in India under technology transfer.
- All procurements under the SP model would be executed by specially constituted Empowered Project Committees to supply focussed attention and guarantee timely execution.

Defence Acquisition Council (DAC)

- It is chaired by the Union Minister of Defence.
- Its objective is to confirm expeditious procurement of the approved necessities of the soldiers in terms of capabilities sought-after.

The functions of the DAC include:

- In-principle approval of fifteen Year long-run Integrated Perspective plan for Defence Forces;
- Accord of Acceptance necessarily to acquisition proposals; Categorization of the acquisition proposals concerning to 'Buy', 'Buy & Make' and 'Make'; Issues concerning to Single vendor clearance; and Decision concerning 'offset' provisions in respect of acquisition proposals higher than Rs.300 crores

Topic 27. KERALA WON BATTLE AGAINST KARNATAKA FOR KSRTC

Importance for Prelims: Economy

After a seven-year legal battle for the trademark, Kerala has declared that the Trade Marks Registry's final verdict on Wed gave it the correct to use the abbreviation KSRTC, its emblem, and even the nickname 'Anavandi', that means elephant vehicle.

Trademark

- Trademark refers to graphical representation of products or services to create it distinguishable from others.
- It will be words, symbols, sound, colours, form of products, graphics representation or packaging etc.
- It protects owner against unfair competition, prevents damage to name of owner and client welfare.
- In India, logos are governed under trademarks Act, 1999 (it deals with precise nature of rights one will acquire in respect of trademarks), below aegis of Department of commercial Policy & Promotion (DIPP), Ministry of Commerce.
- The implementing body is Controller General of Patents, styles and logos.

Topic 28. NCP OPPOSES RBI SUPERVISION OF COOPERATIVE BANKS

Importance for Prelims: Economy

The changes to The Banking Regulation Act approved by Parliament in September 2020, brought cooperative banks under the direct supervising of the Reserve Bank of India

- Before, all the co-operative banks came under dual regulation of the run batted in and the Registrar of Co-operative Societies, resulting in regulative and supervisory lapses at several of those banks.
- The Reserve Bank of India had no powers to draw up an enforceable scheme of reconstruction of a co-operative bank.
- However, from currently onwards the urban and multi-state co-operative can come under the direct supervising of Reserve Bank of India.

Benefit:

- The move can empower the Reserve Bank of India to manage all urban and multi-state co-operative banks on the lines of commercial banks.
- Earlier, the Supreme Court pronounced that co-operative banks come within the definition of 'Banks' under the Banking Regulation Act, 1949 for the needs of the Sarfaesi Act, 2002.
- The Sarfaesi Act is an efficient tool for bad loans (Non-Performing Assets) recovery.
- It will give a lot of security to depositors.
- In India, there are 1482 urban co-operatives banks and fifty eight multi-state co-operative banks.
- These banks have a investor base of 8.6 crores, who have saved a large amount of Rs. 4.84 lakh crore with these banks.

Co-operative Banking

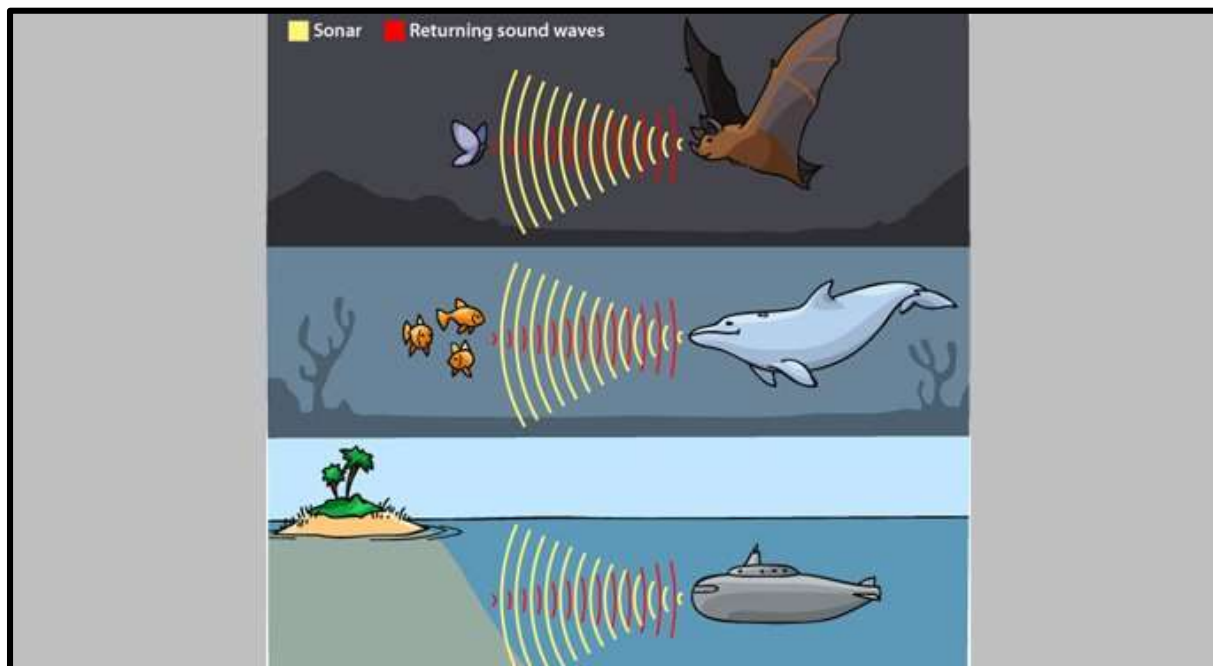
- A Co-operative bank may be a monetary entity that belongs to its

members, who are at the same time the owners and therefore the customers of their bank. It's distinct from commercial banks.

- They are broadly classified into Urban and Rural co-operative banks supported their region of operation.
- They are registered below the Co-operative Societies Act of the State concerned or under the Multi-State Co-operative Societies Act, 2002.
- The Co-operative banks are governed by the Banking regulations Act, 1949.
- Banking Laws (Co-operative Societies) Act, 1955.

Topic 29. ECHOLOCATION

Importance for Prelims: Science & tech



The Durham analysis, published on Wed within the journal PLOS One, focuses on how even simply visually impaired individuals will learn echolocation, and whether or not age influences learning.

Echolocation

- Echolocation, conjointly known as bio sonar, may be a biological sonar used by many animal species.
- Echolocating animals emit calls out to the atmosphere and hear the echoes of these calls that return from varied objects close to them.
- They use these echoes to find and determine the objects. Echo sounding is used for navigation, foraging, and hunting in varied environments.
- Echolocating animals include some mammals (most notably Laurasiatheria) and a few birds.
- Especially some bat species and odontocetes (toothed whales and dolphins), but also in easier forms in alternative groups like shrews, and 2 cave dwelling bird groups, the so-called cave swiftlets within the genus

Aerodramus (formerly Collocalia) and the unrelated oilbird *Steatornis caripensis*.

Durham study

- The researchers organized a 10-week coaching programme, during which twelve blind and 14 sighted volunteers aged between twenty one and seventy nine were taught click-based echo sounding, as per BBC Science Focus.
- The volunteers were trained in differentiate between measurement of objects, orientation perception and virtual navigation.
- At the end of the coaching, the participants had been able to improve their ability to navigate using clicking noises either from one's mouth, walking cane taps or footsteps.

Topic 30. CIBER 2 AND COUNTING OF STARS

Importance for Prelims: Science & tech

Recently, a NASA-funded rocket's launch window can open at the White Sands Missile range in new mexico, USA.

Cosmic Infrared Background Experiment (CIBER)-2

- The scientists have estimated that on the average every galaxy consists of concerning 100million stars in order to roughly estimate the number of stars within the Universe.
- The instrument can launch aboard a sounding rocket, a little suborbital rocket that will carry scientific instruments on brief journeys into space before it falls back to Earth for recovery.
- The aim of this mission is to count the number of stars that exist within the Universe.
- It is meant to continue the spectro-photometric and fluctuation campaign of the Extragalactic Background light (EBL) within the close to infrared.
- It can help to evaluate and find true figures of the stars, because the highest estimated number of the celestial bodies from the huge universe may not be enough.
- It could be a near-infrared rocket-borne instrument designed to conduct comprehensive multi-band measurements of extra-galactic background light (EBL) anisotropy on arc-second to degree angular scales.

Working of CIBER-2

- It can survey a patch of sky that may include dozens of clusters of galaxies.
- The instrument won't actually count individual stars however it'll instead find the extragalactic background light, that is all of the light that has been emitted throughout the history of the Universe.
- It can target a portion of the cosmic infrared background, that is emitted

by some of the foremost common stars.

- It is aiming to look at how bright this light is to provide scientists an estimate of how many of those stars are out there.

Extragalactic Background light and Cosmic Infrared Background

- The EBL could be a background glow of the collective photons created within the universe over time.
- It was utilized in the 1st CIBER mission to determine the overall light from stars through optical to ultraviolet scale.
- The objective is to use cosmic infrared background to point out the common types of stars like M and K dwarfs.
- The sounding rocket can measure the amount of stars not by counting the physical bodies themselves, however by the traces of lights that are emitted by stars in faint galaxies.

Topic 31. CLEAN ENERGY MINISTERIAL INDUSTRIAL DEEP DECARBONISATION INITIATIVE (IDDI)

Importance for Prelims: Governance



India along side Govt. of UK launched new workstream to promote industrial energy potency under the Clean Energy Ministerial's (CEM) – Industrial Deep Decarbonization Initiative (IDDI) at the twelfth Chief Energy Ministerial (CEM).

- The Clean Energy Ministerial Industrial Deep Decarbonisation Initiative (IDDI) is a global coalition of public and personal organisations who are operating to stimulate demand for low carbon industrial materials.
- Coordinated by UN Industrial Development Organization (UNIDO), the IDDI is co-led by the United Kingdom and India. Additional members include Germany and Canada.
- The initiative additionally includes organizations like the Mission Possible Platform, the Leadership Cluster for the Business Transition, the International Renewable Energy Agency (IRENA) and therefore the World Bank.

- The objective is to tackle carbon intensive construction materials like steel and cement by infusing green technologies and stimulate demand for low-carbon industrial material.

Topic 32. OPERATION SAGAR AARAKSHA II

Importance for Prelims: Defence

Indian Coast Guard (ICG), in coordination with Sri Lankan authorities, has been tirelessly engaged in fighting a major fire aboard the Chemical laden container vessel MV X-Press Pearl anchored off Colombo since twenty five May 2021.

- The coordinated joint operation between India and Sri Lanka undertaken to respond to potential environmental danger has been christened as Sagar Aaraksha-II.
- Indian Coast Guard ships, together with the specialised pollution response vessel Samudra Prahar and offshore patrol vessel Vajra are on standby in vicinity to respond to the developing situation.
- The ICG being an energetic member of South Asia Co-operative Environment Programme (SACEP) remains committed to its responsibility of safeguarding of the ocean atmosphere within the region.

International Maritime Dangerous Goods (IMDG)

- The vessel once caught with fire was carrying 1486 containers containing chemical cargo classified as International Maritime Dangerous merchandise (IMDG).
- Among different chemicals, the IMDG cargo consisted of extremely inflammable Nitric Acid, Methanol, methyl Acetate, sodium hydroxide and polystyrene beads.

Topic 33. INS SANDHAYAK DECOMMISSIONED

Importance for Prelims: Defence

Navy's Hydrographic Survey Ship Sandhayak To Be Decommissioned

Indian Navy's hydrographic survey ship, Sandhayak would be decommissioned after serving the nation for 40 years.

The decommissioning ceremony of INS Sandhayak will be held at naval dockyard Visakhapatnam and will be a low-key event attended only by in-station officers and sailors.



Recently, the Ministry of Defence has declared the decommissioning of INSSandhayak.

About INS Sandhayak

- It is that the 1st of its category indigenously designed and built hydrographical Survey Ship of Indian Navy.
- It was conceptualised by then Chief Hydrographer to the government. of India, RearAdmiral FL Fraser.
- The style was finalised by military service Headquarters and therefore the construction of the ship began at GRSE kolkata by laying the keel in 1978.
- It was commissioned within the Indian Navy in 1981.
- It has undertaken approximately two hundred major hydrographic Surveys and numerous minor surveys in each East and West coasts of the country, the Andaman seas and the neighbouring countries too.
- It has been an active participant in several significant operations such

as: Operation Pawan: helping the Indian Peace Keeping Force in Sri Lanka in 1987;

- Operations Sarong and Rainbow: Rendering humanitarian help post tsunami of 2004; and Participation in maiden joint INDO-US HADR Exercise 'Tiger-Triumph'

Topic 34. LAKSHADWEEP

Importance for Prelims: Geography



An isolated island that became a freezing point of cultures.

About Lakshadweep

- Lakshadweep may be a tropical archipelago of thirty six atolls and coral reefs within the Laccadive Sea, 280 kilometre to 480 kilometre off the coast of Kerala. eleven are inhabited.
- But presently, there are thirty five islands, because the Parali one island submerged in water due to sea erosion.
- Lakshadweep means that “one lakh islands” in Malayalam, the official also as the widely spoken native language within the territory. Fishing is that the most important industry.

- The islands form the littlest union territory of Asian country and their total surface area is just thirty two kilometre sq..
- Kavaratti serves as the capital of the Union Territory and also the region comes under the jurisdiction of Kerala supreme court. it's a uni-district Union Territory.
- The principal languages of Lakshadweep are malayalam, Jeseri (DweepBhasha) and Mahl.
- These islands were earlier called as Laccadive, Minicoy, and Amindivi Islands.

Geography

- The island is situated within the Laccadive ocean extending between eight degree N and 12 degree N latitude.
- The entire Lakshadweep islands cluster is created from coral deposits.
- The islands contain unconsolidated pebbles, shingles, cobbles, and boulders.
- All atolls are surrounded by Fringing Reefs.
- These islands are a section of Reunion Hotspot volcanism.
- Amindivi Islands are the northern-most whereas the Minicoy island is the southernmost.
- Eight Degree Channel (8 degrees north latitude) separates the islands of Minicoy and Maldives.
- Nine Degree Channel (9 degrees north latitude) separates the island of Minicoy from the main Lakshadweep archipelago.
- Largest island: Minicoy Island (south of the nine-degree channel) The topography of the Lakshadweep Islands is flat and relief options like hills, streams, valleys, etc. are absent.
- The Islands are extraordinarily vulnerable to sea-level modification as they are doing not rise more than 5 meters higher than ocean level.

- These islands have a north-south orientation. Exception: solely Androth has an East-West orientation.

Topic 35. BLUE FINNED MAHSEER OUT OF RED LIST

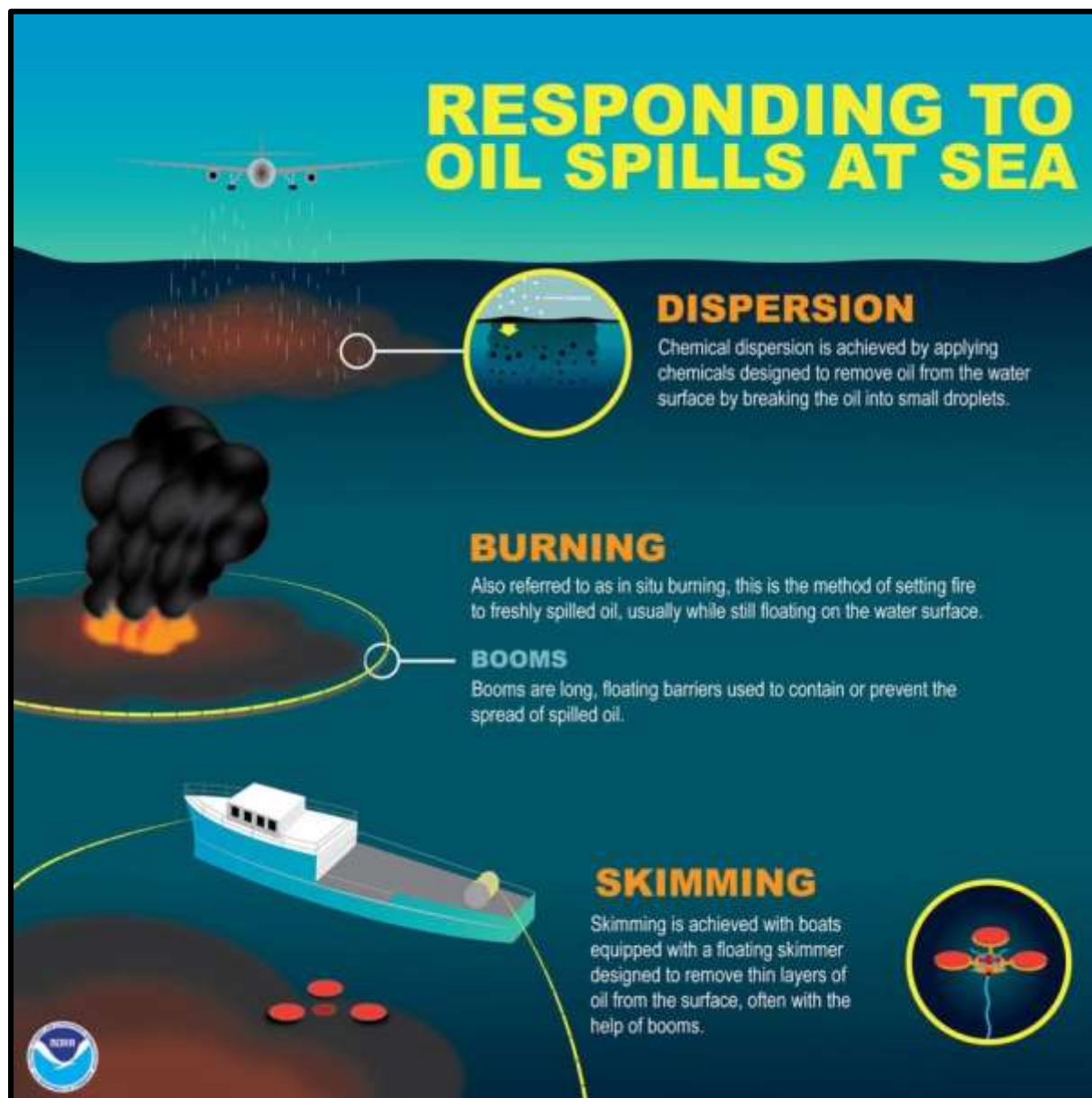
Importance for Prelims: Environment

The Blue-Finned Mahseer, that was on the International Union for Conservation of Nature's (IUCN) red list of endangered species, has currently rapt to the 'least concern' status, a statement from Tata Power said.

- The cluster is involved in conservation of the blue-finned and golden mahseer for 50 years in Lonavala. However, the golden mahseer remains at risk of going extinct.
- "Blue Fin / Deccan Mahseer" or Tor Khudree 1st described by Sykes from the MutaMula watercourse east of Pune.
- This species is additionally found in different rivers of the Deccan plateau.
- The subsequent sub species of Mahseer are typically recognized by researcher in India "Golden Mahseer" or Tor Putitora found within the himalayan streams and rivers.
- "Red Finned Mahseer" or Tor Tor found within the rivers of central india.
- "Chocolate Mahseer" or Neolissochilus hexagonolepis found within the Indian Himalayan region.
- "Humpback Mahseer" or Tor remadevii found within the Cauvery stream and its tributaries.

Topic 36. THREAT OF OIL SPILL IN INDIAN OCEAN

Importance for Prelims: Environment



Sri Lanka on thursday readied for the possibility of an oil spill when a cargoship laden chemically sank off its western coast.

Oil Spill

- An oil spill refers to any uncontrolled release of petroleum, gasoline, fuels, or different oilby-products into the atmosphere.
- Oil spills will pollute land, air, or water, although itis mostly used for oceanic oil spills.

- They became a major environmental problem, chiefly as a result of intensified petroleum exploration and production on continental shelves and therefore the transport of large amounts of oils in vessels.

Environmental Impacts

- Oil on ocean surfaces is harmful to several sorts of aquatic life because it prevents sufficient amounts of daylight from penetrating the surface, and it additionally reduces the level of dissolved oxygen.
- Crude oil ruins the insulating and waterproofing properties of feathers and fur of birds, and so oil-coated birds and marine mammals might die from hypothermia (decrease in body temperature to below-normal levels).
- Moreover, ingested oil will be toxic to affected animals, and damage their habitat and reproductive rate.
- Saltwater marshes and mangroves frequently suffer from oil spills.
- Experts say that despite best efforts, usually less than ten per cent of oil spilled in incidents like these is with success cleaned up.

Cleanup of Oil Spill:

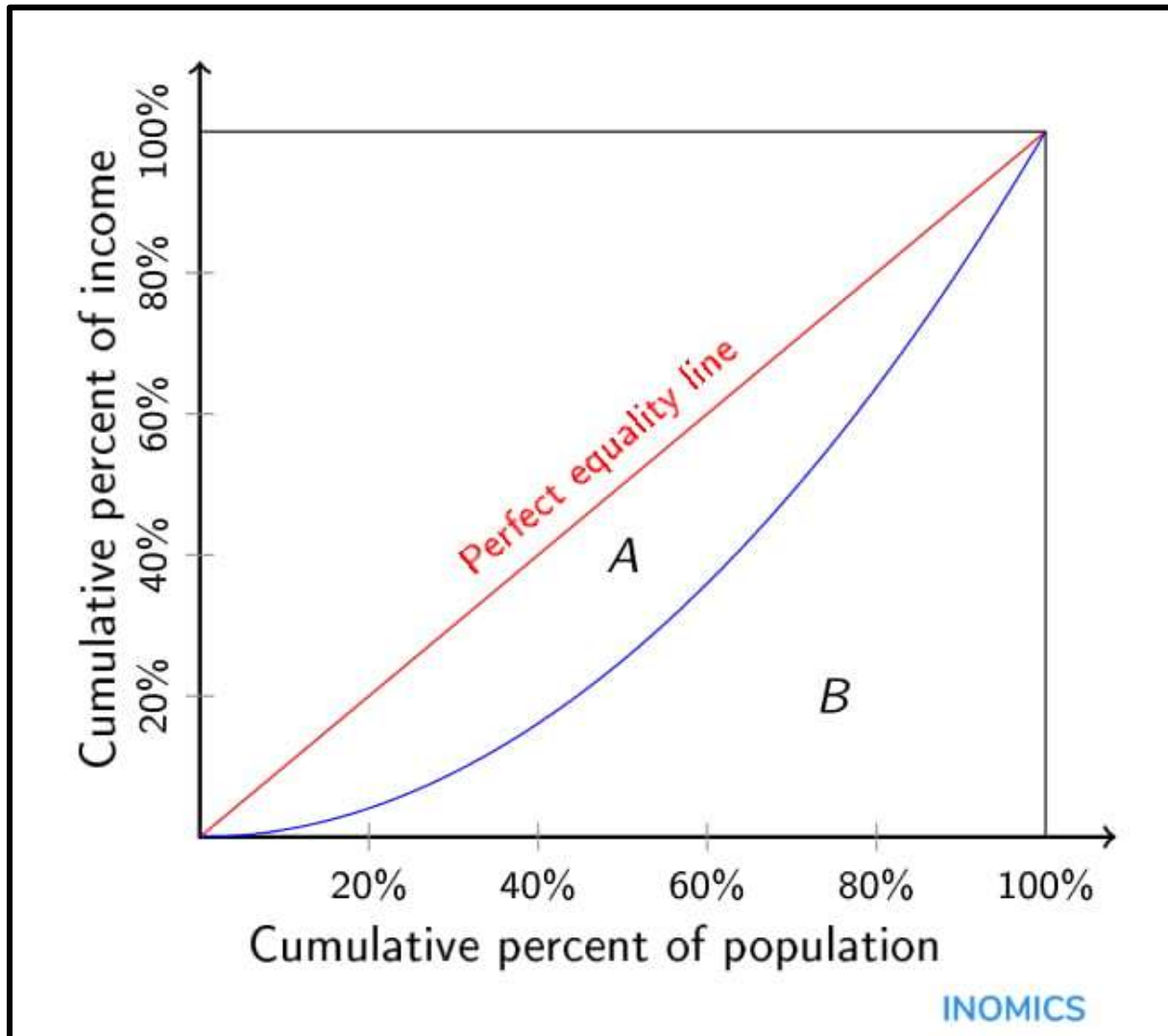
- **Containment Booms:** Floating barriers, known as booms are used to limit the spread of oil and to permit for its recovery, removal, or dispersal.
- **Skimmers:** they're devices used for physically separating spilled oil from the water's surface.
- **Sorbents:** numerous sorbents (e.g., straw, volcanic ash, and shavings of polyester derived plastic) that absorb the oil from the water are used.
- **Dispersing agents:** These are chemicals that contain surfactants, or compounds that act to break liquid substances like oil into little droplets. They accelerate its natural dispersion into the ocean.
- **Biological agents:** Nutrients, enzymes, or microorganisms like *Alcanivorax* bacteria or *Methylococcus* that increase the rate at which natural biodegradation of oil occurs are added.

Liability:

- Under the International Convention on Civil Liability for Bunker Oil Pollution, 2001, the owners of vessels are accountable for damage caused by oil leaks.
- This convention, also called BUNKER convention, came into force in 2008 and is administered by the International Maritime Organization (IMO).
- The Convention was adopted to make sure that adequate, prompt, and effective compensation is available to persons who are suffering damage caused by spills of oil, when carried as fuel in ships' bunkers.

Topic 37. GINI COEFFICIENT

Importance for Prelims: Economics



NITI AAYOG Index show some improvement in SDG on inequity.

Lorenz Curve and Gini Coefficient

- The distribution of financial gain in an economy is represented by the Lorenz Curve and the degree of financial gain inequality is measured through the Gini coefficient.
- One of the 5 major and common macroeconomic goals of a government is the equitable (fair) distribution of financial gain.
- The Lorenz Curve (the actual distribution of financial gain curve), a graphical distribution of wealth developed by Max Lorenz in 1906, shows

the proportion of income earned by any given percentage of the population.

- The line at the 45° angle shows perfectly equal financial gain distribution, whereas the other line shows the actual distribution of financial gain. The additional faraway from the diagonal, the more unequal the size of the distribution of financial gain.

Gini Coefficient

- The Gini constant, that is derived from the Lorenz Curve, is used as an indicator of economic development during a country.
- The Gini coefficient measures the degree of financial gain equality during a population.
- The Gini coefficient will vary from zero (perfect equality) to one (perfect inequality).
- A Gini coefficient of zero means that everybody has a similar financial gain, whereas a coefficient of one represents one individual receiving all the financial gain.

Topic 38. DEVIKA PROJECT OF UDHAMPUR

Importance for Prelims: Economy

Recently, the Ministry of Personnel, Public Grievances & Pensions has said that Devika Project is for all and thus recommendation are welcome from each Party.

About Devika Project

- It is North India's first- of- its- kind project placed in Udhampur, Jammu & Kashmir.
- It is Rs.190 crore project below the National watercourse Conservation plan (NRCP) which started in March 2019.
- The activities intricate below the project are: Bathing "ghats" (places) on the banks of the Devika watercourse will be developed; Encroachments are removed; and Natural water bodies will be renovated and catchment areas are developed along with cremation ground.
- The project includes the development of 3 sewage treatment plants of eight MLD, 4MLD and 1.6 MLD capacities.

About Devika River

- It holds great spiritual significance because it is revered by Hindus because the sister of river Ganga.
- In the NilmatPuran that was written within the seventh century by Nela Muni, it's mentioned that the Devika watercourse could be a manifestation of the mother deity Parwati herself to benefit the folks of MaderDesha.
- It originates from the mountainous SuddhaMahadev temple in Udhampur district and flows down towards western Punjab (now in Pakistan) wherever it merges with the Ravi River.

Topic 39. G 7 NATIONS AGREE ON MINIMUM CORPORATE TAX

Importance for Prelims: International Relations



The cluster of Seven said it'd back a minimum international corporation tax rate of at least fifteen per cent, and place in place measures to confirm that taxes were paid within the countries where businesses operate.

- Major economies are aiming to discourage multinationals from shifting profits — and tax revenues — to low-tax countries regardless of wherever their sales are created.
- Increasingly, income from intangible sources like drug patents, software system and royalties on intellectual property has migrated to those jurisdictions, allowing companies to avoid paying higher taxes in their traditional home countries.

Global minimum tax

- The international minimum tax rate would apply to overseas profits.
- Governments may still set no matter native company tax rate they need, however if companies pay lower rates during a specific country, their home governments could “top-up” their taxes to the minimum rate, eliminating the advantage of shifting profits.

- The OECD said last month that governments broadly agreed on the basic style of the minimum tax however not the rate.
- Other items still to be negotiated include whether investment funds and real estate investment trusts ought to be coated, to apply to use the new rate and guaranteeing it is compatible with U.S. tax reforms aimed toward deterring erosion.

What about that minimum rate?

- Talks are focusing round the U.S. proposal of a minimum international corporation tax rate of fifteen per cent – on top of the level in countries like Ireland however below the bottom G7 level.
- Any final agreement may have major repercussions for low-tax countries and tax havens.
- The Irish economy has boomed with the inflow of billions of dollars in investment from multinationals. Dublin, that has resisted EU attempts to harmonise its tax rules, is unlikely to accept a higher minimum rate while not a fight.

Topic 40. WORLD ENVIRONMENT DAY

Importance for Prelims: Current Events



The World environment Day was ascertained on fifth june, 2021.

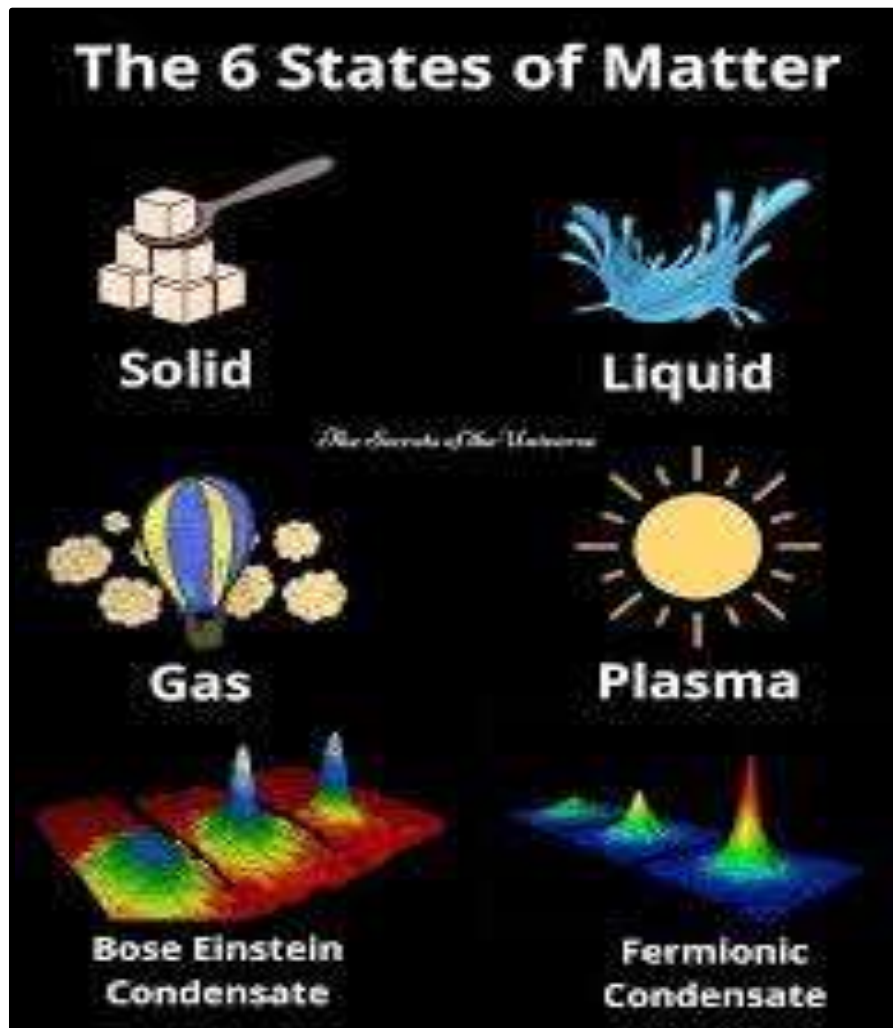
- World environment Day is that the UN day for encouraging worldwideawareness and action to protect our environment.
- **Date of observance:** each year on fifth of june.
- It marks the 1st day of The UN Conference on the Human Environmentwhich was control in stockholm, sweden from june 5–16 in 1972.
- First year of observance of WED: In 1974 the 1st WED was control with the theme“Only One Earth”.
- Theme for 2021 is “REIMAGINE. RECREATE. RESTORE” with focus

on ecosystem restoration (i.e. to prevent, halt and reverse the degradation of ecosystems on each continent and in every ocean).

- Every World atmosphere Day has a completely different host country, wherever the official celebrations take place. Host for 2021 is Pakistan.
- PM Modi addresses the globe atmosphere Day event The Prime Minister discharged the “Report of the professional Committee on Road Map for ethanol mixing in India 2020-2025”.
- Government has resolved to meet the target of twenty per cent ethanol mixing in petrol by 2025.
- Earlier the resolve was to achieve the target by 2030 that is currently preponed by 5 years.
- He additionally launched the ambitious E-100 test in Pune for the manufacture and distribution of ethanol across the country.

Topic 41. BOSE EINSTEIN CONDENSATES

Importance for Prelims: Science & tech



Emergence of order from chaos in tempestuous systems and Bose-Einstein condensation. This ordering leads to aeroelastic flutter and thermoacoustic instabilities recognized throughout the failure of the F1 engine of Apollo rocket throughout trials.

Bose-Einstein Condensates (BECs)

- Bose-Einstein condensates (BECs) — the existence of that was predicted by Albert Einstein and Indian mathematician Satyendra Nath Bose almost a century ago — are shaped once atoms of certain elements are cooled to close absolute zero (0 Kelvin, minus 273.15 Celsius).
- At this point, the atoms become one entity with quantum properties,

where each particle additionally functions as a wave of matter.

- BECs straddle the line between the macroscopic world ruled by forces such as gravity and also the microscopic plane, ruled by quantum mechanics.

Why are BECs important?

- Scientists believe BECs contain important clues to mysterious phenomena like dark energy — the unknown energy thought to be behind the Universe's accelerating expansion.
- But BECs are extraordinarily fragile. The slightest interaction with the external world is enough to heat them past their condensation threshold.
- This makes them nearly not possible for scientists to study on Earth, wherever gravity interferes with the magnetic fields needed to hold them in place for observation.

Topic 42. ASPAGNII(TM) – INDIGENEOUS TUMOUR ANTIGEN

Importance for Prelims: Science & tech



DBT-NII Receives Trademark for India's 1st indigenous tumour AntigenSPAG9.

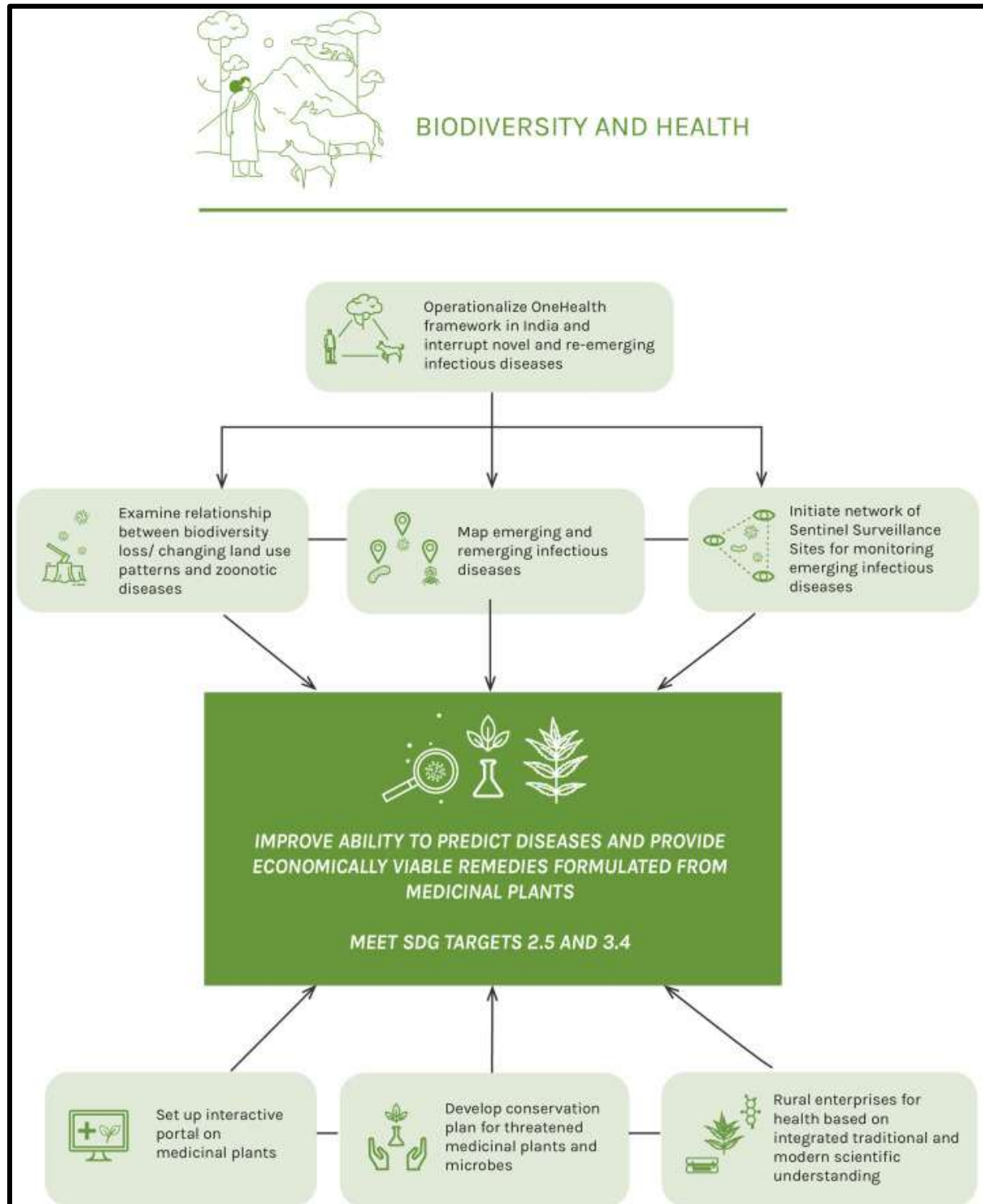
- India's 1st indigenous tumour antigen SPAG9 was discovered by Dr Anil Suri in 1998 who is heading the Cancer analysis Program at the New Delhi-based National Institute of immunology (NII), an Autonomous Institute of Department of Biotechnology (DBT).
- In a recent development, the SPAG9 antigen has received the trademark ASPAGNII™.
- Currently, ASPAGNII™ is getting used in dendritic cell (DC) based mostly immunotherapy in cervical, ovarian cancer and can even be used in breast cancer.

Immunotherapy

- Immunotherapy may be a new approach that exploits the body's inner capability to put up a fight against cancer.
- With this approach, either the immune system is given a improve, or the T cells are "trained" to recognize recalcitrant cancer cells and kill them.

Topic 43. NATIONAL BIODIVERSITY MISSION

Importance for Prelims: Governance



The National biodiversity Mission will assist the dysfunctional relationship between humanity and nature.

- National biodiversity Mission is one among the Prime Minister's Science, Technology & Innovation advisory Council (PM-STIAC) has identified national science missions which aim to address major scientific challenges to confirm India's sustainable development.
- Each mission are led by a lead Ministry and can engage international and national institutional partners, young scientists and business.

National biodiversity Mission

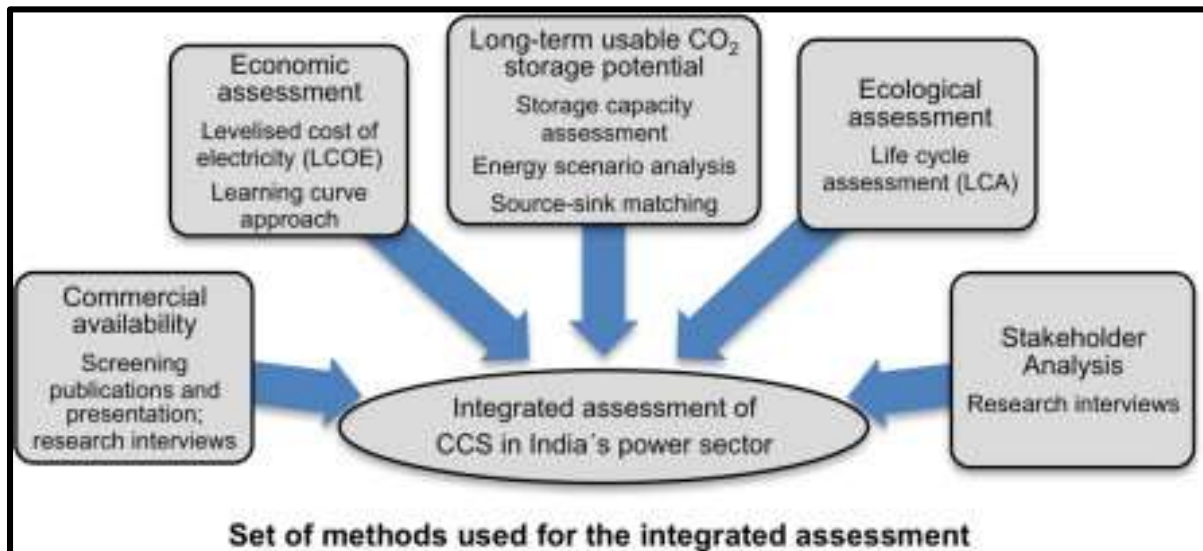
- It can includes, a comprehensive documentation of india's biodiversity with the potential for cataloguing and mapping all lifeforms in India including associated cultural and traditional practices, assessment of the distribution and conservation status of India's biodiversity, development of a cadre of experts adept at handling large sets of environmental information for management and observation of biodiversity establishment of a vibrant biodiversity based economy on a solid foundation of reliable information engagement with the public enhanced choices for agricultural production and livelihood security and therefore the general well-being of society.

Lead Partners:

- Ministry of atmosphere, Forests and Climate Change Department of Biotechnology.

Topic 44. CCS TECHNIQUE POSES THE CHALLENGE OF ESTABLISHING ECONOMICVALUE

Importance for Prelims: Environment



Researchers from Universities of Sydney and Toronto have designed advanced electrolyzers to convert captured carbon into building blocks of everyday materials. Some of it's used to manufacture ethylene.

- CCS technology is designed to capture carbon dioxide emissions from combustion of fossil fuels. It will absorb 85-95% of carbon dioxide emissions within the atmosphere.

What is the process?

- The method starts with the capture of generated carbon dioxide that undergoes a compression method to create a dense fluid. This eases the transport and storage of the captured CO₂.
- The dense fluid is transported via pipelines then injected into an underground storage facility. Captured carbon dioxide may be used as a raw material in alternative industrial processes like bicarbonates.

Global progress on CCS

- Absent from INDCs: CCS is absent from intended nationally determined contributions (INDCs) of most countries. Thus, it's clear that

national policies havenot accepted CCS as a promising technology.

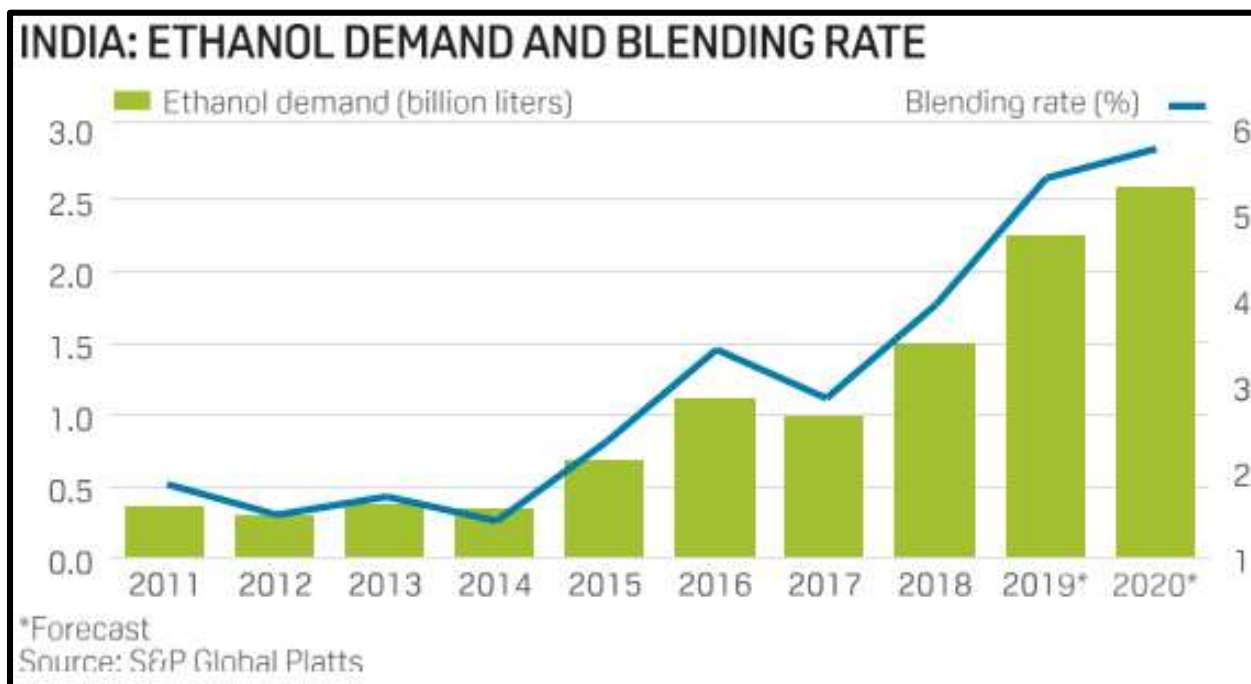
- Less CCUS Facilities: As of 2020, there have been solely twenty six operational CCS facilities capturing around 36-40 million tonnes of carbon annually as value on storage and transportation is one among the major bottlenecks for implementation of CCS.

Indian Government Initiative:

- National Programme on carbon dioxide Research: India's Department of Science and Technology has established a national programme on carbon dioxide storage analysis.
- ACT Initiative: In August 2020, india created a call for proposals to support CCS research, development, pilot and demonstration comes. This is a part of the accelerating CCS technologies (ACT) initiative.
- ACT is a world initiative of sixteen countries to facilitate the emergence of CCUS via transnational funding of projects aimed toward accelerating and maturing CCUS technology through targeted innovation and analysis activities.
- Industry Charter: In Sept 2020, associate 'Industry Charter' for close to zero emissions by 2050 was agreed to by six Indian corporations that may explore different decarbonisation measures as well as carbon sequestration.

Topic 45. ETHANOL BLENDING TARGET YEAR SHIFTED

Importance for Prelims: Economy



Ethanol-petrol-blending twenty per cent target date advanced to 2025.

- As India looks to cut carbon emissions and reduce oil imports, Prime Minister Narendra Modi on Sat declared that the deadline for achieving 20% ethanol-blending with petrol was pushed to 2025 within the country.
- The government set a target of reaching ten per cent ethanol-blending in petrol by 2022 last year, and aimed to mix twenty per cent of ethanol mixed with ninety per cent of diesel by 2030.

About ethanol

- Ethanol could be a bio-fuel obtained primarily from sugarcane, broken food grains such as wheat and broken rice.
- It has a higher octane number than gasoline and therefore, it improves the petro-octane number.
- Mixing it with petrol eases the pressure on India, that is that the world's third-biggest oil importer, and conjointly helps farmers because it provides them with an alternate supply of income.

- It is additionally environment-friendly as agriculture waste is less polluting.