GENERAL STUDIES-1

INDIAN CULTURE

SAHITYA AKADEMI

Why in news?
Kannada litterateur Chandrashekar Kambar has been elected as president of the Sahitya Akademi. Kambar, who has been recipient of various awards including Sahitya Akademi Award, Padma Shri and Pampa Award, will serve as president of the Akademi for a period of five years.

Sahitya Akademi:
Sahitya Akademi, India's National Academy of Letters, is the central institution for literary dialogue, publication and promotion in the country and the only institution that undertakes literary activities in 24 Indian languages, including English. Though set up by the Government, the Akademi functions as an autonomous organisation.

The Government of India Resolution, which set forth the constitution of the Akademi, described it as a national organisation
  ➢ to work actively for the development of Indian letters and
  ➢ to set high literary standards,
  ➢ to foster and co-ordinate literary activities in all the Indian languages and
  ➢ to promote through them all the cultural unity of the country.

Awards: Akademi gives 24 awards annually to literary works in the languages it has recognized and an equal number of awards to literary translations from and into the languages of India.

It also gives special awards called ***Bhasha Samman*** to significant contribution to the languages not formally recognized by the Akademi as also for contribution to classical and medieval literature.

ABU DHABI'S FIRST HINDU TEMPLE

Why in news?
India's Prime Minister recently launched the foundation stone-laying ceremony for the first Hindu temple in the capital of the UAE, home to over three million people of Indian origin.

Details
Swaminarayan temple of the Bochasanwasi Shri Akshar Purushottam Swaminarayan Sanstha will be hand-carved by Indian temple artisans and assembled in the UAE. It will be completed by 2020, and open to people of all

religious backgrounds. It will be the first traditional Hindu stone temple in the Middle East.

RASHTRIYA SANSKRITI MAHOTSAV-2018

What was it for?
To celebrate the idea of unity in diversity, the Ministry of Culture is organising the the Rashtriya Sanskriti Mahotsav at Gwalior.

What does it include?
The Mahotsav will cover a profusion of art forms from classical and folk, music and dance, theatre to literature and the visual arts and would offer the chance to experience the best in established and emerging virtuosity.

Ek Bharat Shreshtha Bharat:
The Ek Bharat Shreshtha Bharat programme was launched to promote engagement amongst the people of different states/UTs so as to enhance mutual understanding and bonding between people of diverse cultures, thereby securing stronger unity and integrity of India.

SOCIAL ISSUES AND INDIAN SOCIETY

MORE THAN 40 INDIAN LANGUAGES WILL SOON BE EXTINCT

Why in news?
As per the Census Directorate, 42 Indian languages are said to be endangered. The languages include dialects as well. The 42 languages are considered endangered because they are spoken by less than 10,000 people.

Endangered languages:
The endangered languages include, 11 from Andaman and Nicobar Islands, 7 from Manipur and 4 from Himachal Pradesh

Efforts to protect these languages:
The Central Institute of Indian Languages has been working on the conservation of these languages. Under the programme, grammatical descriptions, monolingual and bilingual dictionaries, language primers, anthologies of folklore, encyclopedias of all languages or dialects that are endangered are being prepared. There are currently 31 languages in India that have been given the status of official languages by state governments and union territories.

Dialect and a Language
Distinction between the two based can be made based on the concept of Mutual intelligibility. Two languages where speakers can understand each other are considered dialects of the same language, whereas two languages where the speakers cannot understand each other are separate languages.

Historically two dialects with close enough continuous contact will remain mutually intelligible. With enough separation in time and space dialects will eventually turn into separate languages.

GENERAL STUDIES-2

GOVERNANCE ISSUES AND POLICIES

INDUSTRY 4.0 AND NPC

Why in news?
The National Productivity Council observed National Productivity Day on February 12th. It is the 60th Anniversary of the National Productivity Council and is being celebrated as Diamond Jubilee Year.

Theme: "Industry 4.0 Leapfrog Opportunity for India "

Industry 4.0:
Industry 4.0 or the fourth industrial revolution is emerging globally as a powerful force and is being called as the next industrial revolution. It is characterized by the increasing digitization and interconnection of products, value chains and business models.

Industry 4.0 would mean the convergence of real and virtual worlds-the next phase in bringing together conventional and modern technologies in manufacturing. This will result in the "Smart Factory", which is characterized by versatility, resource efficiency, ergonomic design and direct integration with business partners.

National Productivity Council:
Established by: Ministry of Industry, 1958

It is an autonomous, multipartite, non-profit organization with equal representation from employers' & workers' organizations and Government, apart from technical & professional institutions and other interests.
  ➢ It seeks to promote productivity culture in India
  ➢ NPC is a constituent of the Tokyo-based Asian Productivity Organisation (APO), an Inter Governmental Body, of which the Government of India is a founder member.

Functions: NPC teams up with its clients to work out solutions towards accelerating productivity, enhancing competitiveness, increasing profits, augmenting safety and reliability and ensuring better quality.

> - It provides reliable database for decision-making, improved systems and procedures, work culture as well as customer satisfaction both internal & external.
> - The solutions can be all-encompassing or specific depending on the nature of the problem.
> - The council also helps monitor, review and implement the identified strategies.

Organization: The Union Minister for Industry is the President of the NPC, and the Secretary (Industrial Policy and Promotion) is its Chairman.

MEDICAL COUNCIL OF INDIA (MCI)

Why in news?
Medical Council of India (MCI) proposal to amend the Screening Test Regulations 2002 has been approved by Health Ministry. It is now mandatory to qualify NEET to pursue foreign medical course.

About MCI:
Established in 1934 under the Indian Medical Council Act, the objectives include:
- Maintenance of standards in medical education through curriculum guidelines, inspections and permissions to start colleges, courses or increasing number of seats.
- Recognition of medical qualifications.
- Registration of doctors and maintenance of the All India Medical Register.
- Regulation of the medical profession by prescribing a code of conduct and taking action against erring doctors.

Reforming MCI
Like a license-raj permit controller, MCI has for long focused too much on licensing of medical colleges and stipulating impractical conditions, while ignoring its other mandate of maintaining ethical conduct in the profession. It has failed to stop the sale of medical seats in private colleges for capitation fees going up to Rs.50 lakh. Over the years, it has emerged as a single, all-powerful agency heavily influenced by corporate hospitals to provide accreditation to institutions and assess their quality, ignoring blatant conflicts of interest.

PRASAR BHARATI

Why in news?
Public broadcaster Prasar Bharati (PB) has turned down a resolution moved by the Union ministry of information and broadcasting (I&B) to appoint a serving IAS officer to its board, and deferred its proposal to bring in professionals to head the news service units of Doordarshan and All India Radio.

Why was it refused?

The board refused to appoint a serving IAS officer as member (personnel) on grounds that the appointment would go against the norms laid down in The Prasar Bharati (Broadcasting Corporation of India) Act, 1990 and would "amount to infringing Prasar Bharati's autonomy".

What the law says?
As per the PB Act of 1990 the Prasar Bharati Board consists of a chairman, a CEO, two whole-time members for finance and personnel, six part-time members, heads of Doordarshan and All India Radio and one representative of the I&B ministry. There is no provision to have a serving bureaucrat on the board.

Appointment of board members: The PB Act states that the President of India will appoint the Board members decided by a selection committee which is headed by the Vice President of India and includes the Chairman of the Press Council of India and a nominee of the President. The ministry does not have a direct role in appointment of the chairman and whole-time members of the Board.

> **Prasar Bharati:**
> Prasar Bharati is a statutory autonomous body established under the Prasar Bharati Act and came into existence in November 1997. It is the Public Service Broadcaster of the country. The objectives of public service broadcasting are achieved in terms of Prasar Bharati Act through All India Radio and Doordarshan.

CAUVERY WATER DISPUTE VERDICT

Why in news?
The Supreme Court verdict on Cauvery water dispute is out, and it has come as a big relief for Karnataka. Karnataka and Tamil Nadu have been at loggerhead for their 'due share' of Cauvery river.

The verdict
The apex court directed the Karnataka government to release 177.25 TMC of water to Tamil Nadu, 14.75 TMC lesser than what was allotted by the tribunal in 2007. Karnataka will now get 284.75 TMC and Tamil Nadu will get 404.25 TMC of Cauvery water. The top court also made it clear that increase in the share of Cauvery water for Karnataka has been done keeping in view the fact that there is an increased demand of drinking water by Bengaluru and also for many industrial activities.

What's the dispute?
The dispute began with Karnataka's demand of 'equitable sharing of the waters' after it expanded farming activities in the Cauvery basin. It claimed that the previous agreements, which happened between erstwhile Madras Presidency and Kingdom of Mysore in 1924, were highly skewed to what is present day Tamil Nadu. Tamil Nadu used to get about 602 TMC of the total water, leaving only about 138 TMC for Karnataka.

Tribunal order:
In 1990, the union government set up a Cauvery Water Disputes Tribunal or CWDT to look into inter-state river water disputes. In 2007, the Tribunal came out with its order. The Tribunal found the total water of the river 740 thousand million cubic feet (TMC) which it divided (majorly) in Karnataka (270) and Tamil Nadu (419 TMC). Rest of the water was divided into two other states and several other basins. It gave Kerala: 30 TMC, Kabini sub-basin: 21 TMC, Bhavani sub-basin: 6 TMC, Pambar sub-basin: 3 TMC, the Union Territory of Pondicherry: 7 TMC. The Tribunal also awarded 10 TMC for environmental protection and 4 TMC for inevitable escapages into the sea.

What was the demand by Karnataka?
The CWDT had directed Karnataka to release 192 TMC of Cauvery water in normal monsoon year. Karnataka government wasn't satisfied with the Tribunal's order. It moved to the Supreme Court claiming for 312 TMC of water.

TRIBUNAL TO SETTLE MAHANADI WATER DISPUTE

Why in news?
The Union Cabinet has approved the setting up of a tribunal to settle a row between Odisha and Chhattisgarh on sharing the waters of the river Mahanadi. This is in keeping with the recent Supreme Court order directing the Centre to set up a tribunal in response to a plea by the Odisha government to stop the Chhattisgarh government from constructing several weirs on the river.

Legal provisions:
With a chairperson and two other members, the tribunal will be formed according to the provisions of the Inter-State River Water Disputes (ISRWD), 1956. The Chief Justice of India would nominate the chairperson and members for the tribunal from among the judges of the apex court or high courts.

As per provisions of the ISRWD Act, 1956 the Tribunal is required to submit its report and decision within a period of 3 years which can be extended to a further period not exceeding 2 years due to unavoidable reasons.

What's the dispute?
Odisha and Chhattisgarh are locked in a dispute over the Mahanadi waters since the mid-80s. Odisha claimed that Chhattisgarh government has been constructing dams in the upper reaches of the Mahanadi, depriving its farmers who are heavily dependent on the rivers waters. Chhattisgarh has been against the setting up of a tribunal, and argued that the water sharing agreement was with the erstwhile Madhya Pradesh government, before the state was carved out in 2000.

ENFORCEMENT DIRECTORATE

Why in news?
The Enforcement Directorate is grappling with a severe manpower crunch with less than 50% of the approved strength, which has resulted in increased work pressure on the present set-up.

Enforcement Directorate
It is a law enforcement agency and economic intelligence agency responsible for enforcing economic laws and fighting economic crime in India. It is part of the Department of Revenue, Ministry of Finance.

Objectives: The prime objective of the Enforcement Directorate is the enforcement of two key Acts- the Foreign Exchange Management Act 1999 (FEMA) and the Prevention of Money Laundering Act 2002 (PMLA).

Composition: It comprises officers of the Indian Revenue Service, Indian Police Service and the Indian Administrative Service.

WELFARE SCHEMES AND DEVELOPMENTAL GROUPS

LPG PANCHAYAT

What is it?
The President of India recently hosted an 'LPG Panchayat' at Rashtrapati Bhavan, organised by the Ministry of Petroleum and Natural Gas

Aim: to provide a platform for LPG consumers to interact with each other, promote mutual learning and share experiences.

Details
The LPG Panchayat is an interactive communication platform aimed at educating rural LPG users about proper safety precautions to be taken while using LPG, its benefit to the environment, its effect on women empowerment and health.
   - Each LPG Panchayat has about 100 LPG customers coming together, near their living areas, to discuss safe and sustainable usage of LPG, its benefits and the link between clean fuel for cooking and women's empowerment.
   - One lakh LPG Panchayats would be activated across the country under the scheme during the next one and a half years.
   - The idea of this platform is to trigger a discussion through sharing of personal experiences on the benefits of use of clean fuel compared to traditional fuels like cowdung.
   - The agenda would also include safe practices, quality of service provided by distributors and availability of refill cylinders.

Pradhan Mantri Ujjwala Yojana:
Under the Pradhan Mantri Ujjwala Yojana aims at providing 50 million LPG (liquefied petroleum gas) connections to poor households. Under the scheme, an adult woman member of a below poverty line family identified through the Socio-Economic Caste Census (SECC) is given a deposit-free LPG connection with financial assistance of Rs 1,600 per connection by the Centre.
Eligible households will be identified in consultation with state governments and Union territories. The scheme will be implemented over the next three years. The scheme is being implemented by the Ministry of Petroleum and Natural Gas.

NORTHEAST VENTURE FUND

Why in news?
In a bid to make Northeast a favourite destination for young Startups, the government has invited young start-ups to avail the benefits of Northeast Venture Fund.

Ministry: Ministry of DoNER

Details
It is for anybody who wishes to Startup in the Northeast region, which would provide a huge financial relief particularly to young entrepreneurs. Northeast Venture Fund is the first dedicated venture capital fund for North-Eastern region and the initiative to set it up began in April this year.

'WATAN KO JANO'

Why in news?
The Ministry of Home Affairs (MHA) had recently organized the programme "Watan Ko Jano".

Details
"Watan Ko Jano" is sponsored jointly by Ministry of Home Affairs, Government of India (Kashmir Cell) and State Rehabilitation Council Social Welfare Department. The programme aims to give exposure to the youth and children of Jammu and Kashmir about the cultural and socio-economic development taking place in other parts of the country.

NITI FORUM FOR NORTHEAST

Why in news?
The Union Government has issued order setting up the 'Niti Forum for North-East'.

NITI Forum for Northeast:

'Niti Forum for North-East' has been set up to identify constraints and recommend suitable interventions for speedy and sustainable growth in northeast region.

Functions: The NITI Forum for Northeast is tasked to identify various constraints on the way of accelerated, inclusive and sustainable economic growth in the North East Region of the country and to recommend suitable interventions for addressing identified constraints. It will also review the development status in the NER.

Composition of the Forum:
- Members of the Forum will include Secretaries of Ministries of Road Transport & Highways, Railways, Power, Water Resources, River Development & Ganga Rejuvenation, New & Renewable Energy, Health & Family Welfare, Human Resource Development, Environment, Forest & Climate Change.
- Chief Secretaries of 8 Northeastern states. Secretary, North East Council (NEC), Shillong will be Member Secretary. Joint Secretary (NE), MHA, besides a number of experts from various fields will also be members of the Forum.
- The forum will be co-chaired by the Vice-Chairman of NITI Aayog and Minister of State (I/C), Ministry of Development of Northeastern Region (DoNER).

N GOPALASWAMI COMMITTEE

Why in news?
N Gopalaswami committee has been constituted to select 20 institutes of higher education in India that will be developed into "world-class" institutes-- 10 each (from public and private category) institutions will be accorded the eminence status with a mandate, and supported, to achieve the world-class status over a period of 10 years.

Facilities provided to these institutes
These institutes will be provided with greater autonomy to admit up to 30% foreign students, to recruit up to 25% foreign faculty, to offer online courses up to 20% of its programmes and to enter into academic collaboration with top 500 in the world ranking institutions without UGC permission.

Need for world-class institutes:
India lacks world-class universities according to international rankings, and Indian academics, compared internationally, are rather poorly paid. Students also suffer an immense shortage of places in top academic institutions and throughout the higher education system. India today educates only half as many young people from the university age group as China and ranks well behind most Latin American and other middle-income countries.

INDIA AND ITS INTERNATIONAL RELATIONS

TAPI GAS PIPELINE

Why in news?
Turkmenistan, Afghanistan, Pakistan and India recently ceremonially broke ground on the Afghan section of an ambitious, multi-billion dollar gas pipeline expected to help ease energy deficits in South Asia.

Details
The Turkmenistan-Afghanistan-Pakistan-India Natural Gas Pipeline (TAPI) Project is a natural gas pipeline being developed by the Asian Development Bank.
  - The TAPI pipeline will have a life of 30-year period and be operational in 2018.
  - India and Pakistan would get 38 mscmd each, while 14 mscmd will be supplied to Afghanistan.
  - From the Galkynysh field in Turkmensitan, the pipeline will run to Herat and Kandahar province of Afghanistan, before entering Pakistan.
  - In Pakistan, it will reach Multan via Quetta before ending at Fazilka (Punjab) in India.

Benefits of this project for India:
  - Energy is a growing need, and even if India is able to source energy from other countries like Iran and further afield, both the proximity and abundance of Turkmenistan's reserves, that rank fourth in the world, will make it an attractive proposition.
  - It will bring India much needed energy at competitive pricing, and could easily supply about 15% of India's projected needs by the time it is completed in the 2020s.
  - This project also gives India an opportunity to secure its interest in Central Asia. TAPI's success will also ensure that India, Pakistan and Afghanistan find ways of cooperating on other issues as well.
  - The potential extension of the pipeline to the Gwadar Port in Pakistan will also enable Pakistan to export gas to several countries, thereby increasing its share of revenue.
  - Since the pipeline passes through Afghanistan, it will earn some revenue too in the name of transit fees.
  - It will also reopen a historic route that reconnects South Asia to Central Asia, in the way it was before the British Empire sealed it off.

Challenges before the project:
  1. Security issues
  2. Maintenance
  3. India- Pakistan tensions

H-1B VISA RULES

Why in news?
The US government has announced a new policy that has made the procedure of issuing H-1B visas relatively harder than the existing one. The updated policy is in sync with President Donald Trump's 'Buy American, Hire American' Executive order.

Changes introduced:
The H-1B visa program generally allows a foreign employee to work for a specific sponsoring American employer. As is true in many employment situations, the location of work can change. Under the new policy, the company would have to walk an extra mile to prove that its H-1B employee at a third-party worksite has specific assignments in specialty occupation.
- New employers must provide contracts and itineraries for employees who will work at a third-party location.
- This includes evidence of actual work assignments, which may include technical documentation, milestone tables, marketing analysis, cost-benefit analysis, brochures, and funding documents.

Implications of this move:
The Indian IT companies are among the major beneficiaries of H-1B visas with a significant number of employees deployed at third-party worksites. IT workers from India are always in high demand in American banking, travel and commercial services.

What is H-1B Visa?
The H-1B visa is a non-immigrant visa that allows US companies to employ foreign workers in speciality occupations that require theoretical or technical expertise. The technology companies depend on it to hire tens of thousands of employees each year.

Criticism
The aim of the H1B visa programme was to supplement the US workforce with high-skilled workers to do jobs that Americans are not skilled to do, not to replace the US workers. But over time, there have been many grumblings that many companies use the H1B visa to replace American workers with foreign ones, as the latter can be hired at lower salaries without compromising on the skill sets. In some cases, American employees have alleged that they were made to train H1B holders to do their own jobs, and then fired.

AID TO TONGA

Why in news?

India has contributed USD one million for the rehabilitation efforts in Tonga after the Tropical Cyclone Gita caused massive destruction in the Pacific island nation. India has allocated half the amount in the India-UN Development Partnership Fund for the rehabilitation efforts while the rest will be provided for immediate relief assistance.

India-UN Development Partnership Fund:
It was set up as a partnership between India and the United Nations Office for South-South Cooperation (UNOSSC).

Managed by UNOSSC, the fund will support Southern-owned and led, demand-driven, and transformational sustainable development projects across the developing world. Focusing on Least Developed Countries (LDCs) and Small Island Developing States, United Nations agencies will implement the Fund's projects in close collaboration with partnering governments.

Focus areas: Reducing poverty and hunger, improving health, education and equality, and expanding access to clean water and energy.

NEIGHBOURHOOD FIRST

For the first time, on this year's republic day, the leaders of ASEAN shared stage with our PM. The historic gathering came just two months after Indian PM visited Manila to attend the ASEAN Summit which coincided with the 25th anniversary of India becoming a partner of ASEAN.

India's increased presence in West Asia can be demonstrated by the visit of Israeli Prime Minister Benjamin Netanyahu to India, and Indian Prime Minister's latest forays to the United Arab Emirates (UAE), Oman and Palestine.

Indian PM's neighbourhood first policy was hailed by many as a radical approach to Indian South Asian neighbours. However, somehow a perception has gained ground that the policy has not delivered on its potential.

These developments also demand India to contemplate and reflect deeply on what is happening in India's immediate neighbourhood.
What are the India's recent developments with its neighbourhood?
Recently, India and the ASEAN commemorated 25 years of their partnership, 15 years of summit-level interaction, and five years of strategic partnership. ASEAN-India Commemorative Summit was held on the theme "Shared Values, Common Destiny" with a focus on counter-terrorism, security and connectivity.

India has been engaging successfully with West Asia which is in turmoil for several years. India has been working according to its national interests with a more constructive and long term policies. Indian could maintain good relationship with both Saudi Arabia and Iran. Saudi Arabia is the largest exporter

of oil to India and at the same time India will get operational control of Iran's Chabahar Port.

India's West Asia policy has no reason to share hostility of other countries. It is seen in India's stand against US decision to consider Jerusalem as Israel's capital. India could successfully handle an Israeli Prime Minister's visit to India just prior to PM's visit to Palestine, and yet avoid negative fallout. PM, during his Palestine visit could conclude as many as six agreements and express the hope that Palestine would soon emerge as a sovereign independent country in a peaceful manner.

With UAE, trade and economic ties as also counter-terror aspects have been on a growth curve. India and Oman have close naval co-operation and an agreement was reached to give the Indian Navy access to Duqm port. However, India has some troubled relationship with its immediate neighbourhood.

What are the challenges to India in its immediate neighbourhood?
It is in South Asia where troubles are mounting, where India cannot succeed without looking at some hard options.

Dealing with a new government in Nepal or containing prolonged communal and terror related unrest in Bangladesh will need more than fine gestures; they will need far more closer monitoring.
Another and a more imminent challenge for India is to sort out the imbroglio in the Maldives which is threatening to spill out of control. India cannot afford not to be directly engaged in finding a proper solution.

Anti-Indian tendencies under current President have steadily increased and there has been a pronounced tilt in favour of China. Maldives Free trade agreement with China will provide an excellent opportunity to enhance Chinese influence in western Indian Ocean.

Maldives occupies a crucial position along the main shipping lanes in the Indian Ocean. The Southern Maldives has long remained an object of interest to the major powers. With the U.S. taking a step back, China has begun to display a great deal of interest in the area. This coincides with Chinese on-going plans to take control of Gwadar Port and establish a naval base in Djibouti in the Horn of Africa.

The last year ended with a serious ceasefire violations along the Line of Control with 200% increase in number of violations. Pakistan has also not refrained from persisting with its proxies like the Lashkar-e-Taiba and the JeM in its war with India. Pakistan shows no sign of altering its anti-India trajectory even after US president's changed rhetoric on Pakistan.

Afghanistan's position today is the worst ever since the 1970s. This January, the capital city of Kabul witnessed one of the worst ever incidents of violence anywhere, in which over 100 civilians were killed following a series of terror strikes. This happened despite the presence of foreign troops, elements of the Afghan military and also of the Afghan police.

What is the way out for India?
India cannot afford to remain idle and must come up with a solution early that is consistent with India's strategic interests. Else it would have far-reaching consequences for India in terms of losing its stranglehold in South Asia.

With Pakistan, India can hardly afford to remain as relaxed and let things slide, without effectively trying to find ways and means to change a situation which is certainly not to our advantage.

Equally vital for India is to try and find a way out of the Afghan problem. The collapse of the Afghan state does have severe consequences for India and nations in the vicinity. As a regional power, India has significant stakes in Afghanistan. India has spent over $2billion in providing humanitarian assistance to Afghanistan. So, India's true stake lies in sustaining the future of the Afghan state. This is something that demands India's critical attention and specially for a display of its leadership skills.

TUIDIMJANG DAM
Why in news?
Myanmar is constructing a dam, called Tuidimjang, on the Twigem river flowing into Myanmar from Manipur.

What's the issue?
Since, Tuidimjang dam is being constructed across a river close to the boundary with India, it has stoked fears of submergence and water scarcity among border villagers Manipur's Chandel district. Also, the villagers, dependent on the river, are already facing water scarcity.
Also, the dam is being built by Myanmar authorities barely 100 metres from the Zero Line separating the two countries. International rules warrant border countries to check activities in No Man's Land – a 150-metre strip on either side of the boundary line.

INDIA'S NEW GATEWAY TO SOUTH-EAST ASIA
Where is it?
Jogighopa, a small town on the banks of Brahmaputra in Assam, is set to become India's gateway to South-East Asia as well as the rest of the North-East with the road ministry gearing up to develop a multimodal logistics park (MMLP) there with road, rail, waterways and air transport facilities.

Details
A special purpose vehicle, backed by the Asian Development Bank (ADB), will be created to execute the project, which will be executed in two phases.

The need
The current transit corridors from mainland India to the North-East region pass through an area known as the "Chicken's Neck"—a narrow tract of land in India between the borders with Bangladesh, Nepal and Bhutan. Since it is close to these borders and cannot be expanded, the North-East region requires an alternative route for providing connectivity to the rest of India—a route with adequate expansion potential. The Indo-Bangladesh road route, along with the National Waterways-2, provides such an option.

Significance
The move comes at a time when India's neighbours are gearing up for trade. For example, Bangladesh's development of the Khulna-Dhaka-Sylhet Economic Corridor and the Banglabandha-Dhaka-Chittagong-Cox's Bazar Economic Corridor—to promote industrial development in the region. These initiatives are expected to drive freight movement in the region and facilitate trade between India and Bangladesh, and between Bangladesh and Bhutan through India.

In conclusion
North-East is one of the regions which has played a pivotal role in terms of logistics connectivity with the international and national corridors of India. And Asean's (Association of Southeast Asian Nations) strong bond with the North-East region will act as a mascot for the entire region and for the rest of the businesses in India.

PORT DUQM
Why in news?

In a strategic move to expand its footprint in the Indian Ocean region, India has secured access to the key Port of Duqm in Oman for military use and logistical support. Now, it will be available for maintenance of Indian military vessels.

Significance

The Port of Duqm is situated on the southeastern seaboard of Oman, overlooking the Arabian Sea and the Indian Ocean. It is strategically located, in close proximity to the Chabahar port in Iran.

With the Assumption Island being developed in Seychelles and Agalega in Mauritius, Duqm fits into India's proactive maritime security roadmap. This is also part of India's maritime strategy to counter Chinese influence and activities in the region. The Port of Duqm also has a special economic zone, where about $1.8 billion investments are being made by some Indian companies.

Importance of Indian ocean

It enjoys a privileged location at the crossroads of global trade, connecting the major engines of the international economy in the Northern Atlantic and Asia-Pacific. This is particularly important in an era in which global shipping has burgeoned.

- Indian Ocean is also rich in natural resources-- 40% of the world's offshore oil production, Fishing accounts for almost 15% of the world's total.
- Mineral resources are equally important, with nodules containing nickel, cobalt, and iron, and deposits of manganese, copper, iron, zinc, silver, and gold. Additionally, various rare earth elements are present, even if their extraction is not always commercially feasible.

India's Importance in the region:

Indeed, for the rest of the Ocean's littoral states, and even those outside the region, India's leadership role will be important in determining the strategic future. Finally, there is a strong security dimension to India's engagement with the Indian Ocean, beyond traditional naval considerations.

In conclusion

Indian ocean region is the primary area of concern for India. Securing its position here is vital before venturing elsewhere. While reiterating its commitment to upholding the established laws of the global commons, New Delhi should not go adrift in the larger Indo-Pacific. As more powers make inroads into this strategically crucial space, India must consolidate its position and not expect others to do its job, for it would only mean ceding space in the long run.

INTERNATIONAL AFFAIRS

UN REFUGEE PROGRAMME: TANZANIA'S WITHDRAWAL

Why in news?
Tanzania has decided to withdraw from UN refugee programme for reasons of security and lack of funds. Tanzania has long been considered a safe haven for refugees, particularly from Burundi and the Democratic Republic of Congo.

UN refugee programme:
The New York Declaration or Comprehensive Refugee Response Framework, or CRRF talks about Refugee crisis comprehensively. It calls for greater support to refugees and the countries that host them. The New York Declaration for Refugees and Migrants is a milestone for global solidarity and refugee protection at a time of unprecedented displacement across the world.
- Adopted by all 193 Member States of the United Nations in September 2016
- It contains historic and wide-ranging commitments that reaffirm the commitment by Member States to respect the human rights of refugees and migrants and to support the countries that welcome them.
- Provides lasting solutions for refugees, including integration into host communities.

6TH EDITION OF WORLD GOVERNMENT SUMMIT

Venue: Dubai, UAE

Details
It is a global platform dedicated to shaping the future of government worldwide. Each year, the Summit sets the agenda for the next generation of governments with a focus on how they can harness innovation and technology to solve universal challenges facing humanity. It functions as a thought leadership platform and networking hub for policymakers, experts, and pioneers in human development.

The Summit is a gateway to the future as it functions as a stage for analysis of the future trends, issues, and opportunities facing humanity. It is also an arena to showcase innovations, best practice, and smart solutions to inspire creativity to tackle these future challenges.

India's Umang App, Aadhaar win awards
India's Aadhaar programme was recognised as the world's largest biometric enabled identification programme at the recently concluded World Government Summit 2018 in Dubai.
Umang app was named winner of the Best M-Government Service Award for the Accessible Government category. The application provides users a unified

platform that combines government departments and services, facilitating transactions for citizens.

ANTI-DUMPING DUTY
Why in news?
The Directorate General of Anti-dumping and allied Duties (DGAD) will review whether the expiry of anti-dumping duty (on imports of flat base steel wheels from China) is likely to lead to continuation or recurrence of dumping and injury to the domestic (Indian) industry."

What do the WTO Rules say?
As per the World Trade Organisation, if a company exports a product at a price lower than the price it normally charges in its domestic market, it is said to be "dumping" the product. The global body has also said that the WTO agreement allows governments to act against dumping where there is genuine ("material") injury to the competing domestic industry.

Anti-dumping duty
It is a measure to rectify the situation arising out of the dumping of goods and its trade distortive effect. The purpose of anti dumping duty is to rectify the trade distortive effect of dumping and re-establish fair trade.

The use of anti dumping measure as an instrument of fair competition is permitted by the WTO. It provides relief to the domestic industry against the injury caused by dumping. It is levied on distrustfully low-priced imports, so as to protect the domestic manufacturers.

CORRUPTION PERCEPTION INDEX
Why in news?
The annual corruption index of Transparency International for the year 2017 has been released. The index ranks 180 countries and territories by their perceived levels of public sector corruption. The index uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean.
Performance of various countries
- New Zealand and Denmark were ranked as the cleanest countries in the 2017 list as in 2016
- Syria, South Sudan and Somalia were ranked as the most corrupt countries
- India has been ranked 81st. While it maintained its score at 40 on a 100-point scale where anything below 30 is considered seriously corrupt, its ranking changed from 79th last year partly because Vanuatu, one of the countries added to the rankings this year, was rated higher and partly because others improved.
- China, Pakistan and Russia are more corrupt than India
- The index also characterised India as "among the worst regional offenders" in the Asia Pacific region on grounds of journalists, activists,

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opposition leaders and even staff of law enforcement or watchdog agencies being threatened or even murdered. In this, it was clubbed with the Philippines and Maldives.

PAKISTAN ADDED TO FATF GREY-LIST

Why in news?
Financial Action Task Force (FATF) has added Pakistan's name to the grey-list of terror-financing watch list. This was decided in a recently held meeting in Paris. Pakistan was previously on the list for three years until 2015.

Implications of this move:
Being put on the FATF watchlist could deal a blow to Pakistan's economy, making it harder for foreign investors and companies to do business in the country.
- It would be counterproductive to put Pakistan on the watch list as it would hurt its capability to fight terrorism.
- Being placed on the FATF watchlist carries no direct legal implications, but brings extra scrutiny from regulators and financial institutions that can chill trade and investment and increase transaction costs.

FATF:
The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 on the initiative of the G7. It is a "policy-making body" which works to generate the necessary political will to bring about national legislative and regulatory reforms in various areas.

Objectives:
The objectives of the FATF are to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.

The FATF monitors the progress of its members in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures, and promotes the adoption and implementation of appropriate measures globally. In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

GENERAL STUDIES-3

INDIAN ECONOMY

PRIVATISING PUBLIC SECTOR BANKS

Why in news?
Industry body FICCI has called for privatisation of public sector banks (PSBs), saying that the recapitalisation efforts by the government have had little effect on improving their health.

Need for Privatisation:
There is a continuous pressure on the government finances on account of the weak performance of the banks. Privatisation would reduce the drain on the exchequer and the money saved could be used for developmental schemes and programmes of the government.

Benefits of private banks:
➢ Private banks will bring innovations in products, technology and customer servicing and a market-based discipline to lending.
➢ Private banks, knowing that they cannot count on government's protection, are unlikely to engage in the sort of risky lending that characterised public bank lending.
➢ Also, they will not be subject to the same pressure from politicians and others in government that has destroyed the public sector banks.

In conclusion
The public-sector banks, which constitute almost 70% of the Indian banking system, are saddled with burgeoning stressed assets. The government has already injected over ₹ 2.6 lakh crore in the public-sector banks through recapitalisation in the last eleven years, which has had limited impact in improving the health of public sector banks thus far.

Therefore, recapitalisation of PSBs alone is not a permanent solution and will not be effective unless the inherent issues related to governance, productivity, risk management, talent, customer service, etc. are resolved. The government should shrink unproductive public sector banks and move forward with increasing private sector participation in the banking sector.

YH MALEGAM COMMITTEE
The Reserve Bank of India (RBI) has constituted an expert committee under the chairmanship of Y H Malegam.

Objective: To look into the entire gamut of issues relating to classification of bad loans, rising incidents of frauds and effectiveness of audits.

OMBUDSMAN SCHEME FOR NBFCs
Why in news?

The Reserve Bank of India (RBI) has issued an ombudsman scheme for non-banking finance companies (NBFCs), offering a grievance redressal mechanism for their customers. The scheme will come into effect immediately.

Who will be the ombudsman?
An officer at the RBI not below the rank of general manager will be appointed by the regulator as the ombudsman with territorial jurisdiction being specified by the central bank. The tenure of each ombudsman cannot exceed three years and can be reduced by the regulator if needed.

Who can file the complaint?
Any customer or person can file a compliant with the ombudsman on various grounds like non-payment or inordinate delay in payment of interest, non-repayment of deposits, lack of transparency in loan agreement, non-compliance with RBI directives on fair practices code for NBFCs, levying of charges without sufficient notice to the customers and failure or delay in returning the securities documents despite repayment of dues among others. Only written complaints or those in electronic format will be accepted.

Appeal:
If a complaint is not settled by agreement within a specified period as the ombudsman may allow the parties, he may, after affording the parties a "reasonable opportunity to present their case, either in writing or in a meeting, pass an award either allowing or rejecting the complaint". The scheme also allows a person to appeal in case of dissatisfaction with any award by the ombudsman.

Compensation:
The ombudsman may also award compensation not exceeding one hundred thousand rupees to the complainant, taking into account the loss of time, expenses incurred, harassment and mental anguish suffered by the complainant.

Report:
The ombudsman will be required to send a report to the RBI governor annually on 30 June containing general review of the activities of his office during the preceding financial year and other information required by the central bank.

AGRICULTURE AND CROPPING PATTERNS

ATAL BHOOJAL YOJANA
Proposed by: The water resources ministry

Details
The scheme is aimed at efficient management of available water resources and strengthening of recharge mechanism through community participation. The

emphasis of the scheme will be on recharge of ground water sources and efficient use of water by involving people at the local level.

Funding: Rs 6,000 crore has been earmarked for this ambitious plan. Half of the total cost of this central scheme will be supported by the World Bank as loan while the remaining half will be funded by the government through budgetary support.

Implementation: The government plans to give 50% of the money to states, including gram panchayats, as incentives for achieving targets in groundwater management. That's a first-ever move to encourage community participation and behavioural changes. The remaining 50% of the funds will be given to states for strengthening institutional arrangements such as providing a strong database and scientific approach to help them accomplish sustainable management of groundwater.

Need for groundwater conservation:
Ground water in India provides for about 60% of the country's irrigation needs, 85% of rural drinking water requirements and 50% of urban water needs. Over-exploitation and contamination have left many blocks across the country in a critical stage, usually referred to as 'dark zones'

The over-exploited units are mostly concentrated in Punjab, Haryana, Delhi, western UP, Rajasthan, Gujarat, Karnataka, Andhra Pradesh, Telangana and Tamil Nadu. Tamil Nadu has the maximum number of 'dark zones'.

Why there is an increased pressure on groundwater?
Main reason for excessive use of groundwater is the legal framework governing access to the resource. This was first introduced in the mid-19th century when judges decided that the easiest way to regulate this 'invisible' substance was to give landowners what amounts to a right to access groundwater found under their land, even if in the process they also used water found under their neighbours' land.

Over the following decades, this led to a framework whereby landowners see groundwater as their own and as a resource they can exploit without considering the need to protect and replenish it since there are no immediate consequences for over-exploiting it with the propagation of mechanical pumps.

In conclusion
The increasing crisis of groundwater and the failure of the existing legal regime make it imperative to entrust people directly dependent on the source of water the mandate to use it wisely and to protect it for their own benefit, as well as for future generations. The theoretical case for water being in the Concurrent List is thus unassailable. Of all the subjects that are or ought to be in the Concurrent

List, water ranks higher than any other. The practical and political difficulties of shifting it there remain, but these would need to be overcome.

e-NAM

Why in news?
In a bid to engage more farmers on the electronic National Agriculture Market (eNAM) platform, the government has unveiled mobile payment facility BHIM, and other features in regional languages as well.

eNAM:
It is an online platform with a physical market or mandi at the backend. It is an instrument to create a national network of physical mandis which can be accessed online. It seeks to leverage the physical infrastructure of mandis through an online trading portal, enabling buyers situated even outside the state to participate in trading at the local level.

OPERATION GREENS

Why in news?
The government recently interacted with the stakeholders including Farmer Producer Organisations and farmers, to gather input on their concerns and suggestions thereof on the modalities of Operation Greens.

What is Operation greens?
Operation Greens aims to promote farmer producers organisations, agri-logistics, processing facilities and professional management. The operation aims to aid farmers and help control and limit the erratic fluctuations in the prices of onions, potatoes and tomatoes.

Significance of Operation greens:
Operation Green (OG) wants to replicate the success story of Operation Flood, in fruits and vegetables, starting with three basic vegetables—tomatoes, onions and potatoes (TOP). The main objective of OG is to reduce price volatility in these commodities, and thereby helping farmers augment incomes on a sustainable basis, as also provide these basic vegetables to consumers at affordable prices.

In conclusion
The litmus test of the success of this OG would be if it can contain roller-coaster rides of booms and busts in prices, and avert scenes of farmers dumping potatoes and tomatoes on roads, as is happening in several parts of India today. Also, containing prices going through the roof compelling the government to put bans on exports, de-stocking or even having income-tax raids on traders.

INDUSTRY, INFRASTRUCTURE AND INVESTMENT

INDIRA GANDHI CANAL

Why in news?
Rajasthan Government has signed a new loan agreement with the New Development Bank for restructuring of Indira Gandhi Canal.

Necessity
The restructuring and repairing of Indira Gandhi Canal and its distributaries will help solve the problems of loss of water and water-locking in the agricultural fields. It will also ensure the supply of irrigation water to the farmers at the tail-ends of the Indira Gandhi Canal Project.

About IGC
The Indira Gandhi Canal is one of the largest canal projects in India. It starts from the Harike Barrage at Harike, a few kilometers below the confluence of the Satluj and Beas rivers in the Indian state of Punjab and terminates in irrigation facilities in the Thar Desert in the north west of Rajasthan state. Previously known as the Rajasthan Canal.

OPEN ACREAGE LICENSING PROGRAMME (OALP)

Why in news?
To handhold and apprise the prospective investor community about the salient features of Hydrocarbon Exploration & Licensing Policy(HELP) framework and details about the e-bidding process, the government of India concluded a facilitation workshop under Open Acreage Licensing Programme (OALP) in Ahmedabad recently.

Open Acreage Licensing Policy (OALP):
The OALP, a part of the government's Hydrocarbon Exploration and Licensing Policy (HELP), gives exploration companies the option to select the exploration blocks on their own, without having to wait for the formal bid round from the Government. The company then submits an application to the government, which puts that block up for bid.

Hydrocarbon Exploration & Licensing Policy (HELP):
The Hydrocarbon Exploration & Licensing Policy (HELP) opens up India' entire sedimentary basin for investment from domestic and foreign players under a simplified, transparent and investor -friendly fiscal and administrative regime.

The new policy aims to provide Investors a ready access to huge amount of seismic data available in National Data Repository (NDR), flexibility to carve out exploration acreages through an open acreage licensing process and increased operational autonomy through a new revenue sharing model. The National Data Repository (NDR) manifested through an open acreage licensing (OAL) process will be a key facilitator.

CHARDHAM MAHAMARG PARIYOJANA

Why in news?
Cabinet Committee on Economic Affairs has approved Silkyara Bend-Barkot Tunnel in Uttarkhand as part of 'Chardham Mahamarg Pariyojana'.

Silkyara Bend-Barkot Tunnel:
- The construction of this tunnel will provide all weather connectivity to Yamunotri, one of the dham on Chardham Yatra, encouraging regional socio-economic development, trade and tourism within the country.
- It will reduce the travel distance and time from Dharasu to Yamunotri.
- The project will be falling along NH-134 (old NH-94) in the State of Uttarakhand.
- The project will be built under Engineering, Procurement and Construction (EPC) Mode. This is funded under NH (O) Scheme of Ministry of RT&H and forms part of ambitious Chardham Plan.

Chardham Pariyojana:
The Chardham Mahamarg Vikas Pariyojna, or the Chardham highway development project, is an ambitious initiative to improve connectivity to the Char Dham pilgrimage centres in the Himalayas. The project's main objective is to develop around 900 km of national highways. These highways will be built in Uttarakhand.

The project will make travel to the Char Dham (Gangotri, Yamunotri, Kedarnath and Badrinath) safer and more convenient. The project involves widening the existing, geometrically deficient highway that connects the four abodes.

DELHI MUMBAI INDUSTRIAL CORRIDOR (DMIC)

Why in news?
The Delhi Mumbai Industrial Corridor (DMIC), a mega infrastructure project, has attracted interest from companies based out of Canada, the U.S., Singapore and Taiwan.

DMIC:
Delhi-Mumbai Industrial Corridor is a mega infra-structure project of USD 90 billion with the financial & technical aids from Japan, between the political capital and the business capital of India, i.e. Delhi and Mumbai. A MoU in this regard was signed in 2006.

Components: The project would include six mega investment regions of 200 square kilometres each and will run through six states Delhi, Western Uttar

Pradesh, Southern Haryana, Eastern Rajasthan, Eastern Gujarat, and Western Maharashtra.

Aim: The project aims to develop an environmentally sustainable, long lasting and technological advanced infrastructure utilizing cutting age Japanese technologies and to create world class manufacturing and investment destinations in this region.

COAL BLOCKS

Why in news?
The opening up of commercial coal mining for private sector is the most ambitious coal sector reform since the nationalisation of this sector in 1973.

New methodology
As per the new methodology, there will be no end use restriction or price restriction for the coal that is mined from these blocks. The blocks will be awarded through a forward auction. The amount accrued through the bids will be in addition to the royalty that the States get. All the revenue from the sale of these blocks will go into coffers of the States where they are located.

Significance of this move:
As the entire revenue from the auction of coal mines for sale of coal would accrue to the coal bearing States, this methodology shall incentivise them with increased revenues which can be utilised for the growth and development. States in Eastern part of the country will be especially benefited.
- The auction of coal mines to private operators will help in boosting the economy.
- Commercial coal mining will help increase efficiency and productivity in the sector and will attract fresh local and foreign investments.
- It will also lead to the availability of low cost power and Coal India will benefit from the government's move.
- As 70% of India's electricity is generated from thermal power plants, opening coal blocks for commercial purposes will ensure energy security and accountable allocation of coal and as a result, it will ensure cheaper electricity for consumers.

Backgrounder:
Despite the increasing share of non-fossil fuels in India's energy mix, the market for coal is projected to grow at a solid pace. Also, coal exports are a potentially lucrative business for India. Recent years have seen other state-run entities too establishing a presence in commercial coal mining and a jump in captive coal production by a veritable cross-section of industries, public and private, but only commercial coal mining by the private sector was to bring a transformative change in the sector.

KALESWARAM PROJECT

Why in news?
In a major relief to the Telangana government, the Supreme Court has refused to intervene in an order granted by the Hyderabad High Court suspending the order of the National Green Tribunal staying the construction of the Kaleswaram Lift Irrigation Project. The NGT bench at Chennai had directed the Telangana government to stay the construction of the project.

What's the project?
The Kaleshwaram project is an off-shoot of the original Pranahitha-Chevella Lift Irrigation Scheme taken up in 2007 when Andhra Pradesh was not divided. After the formation of Telangana in 2014, the govt redesigned the project on the ground that the original plan had too many environmental obstacles and had very low water storage provision. The project is designed to irrigate over 18.47 lakh acres uplands

What's unique?
According to engineers, KLIP has many unique features, including the longest tunnel to carry water in Asia, running up to 81 km, between the Yellampally barrage and the Mallannasagar reservoir. The project would also utilise the highest capacity pumps in the country to lift water.

STRATEGIC PETROLEUM RESERVE (SPR) PROGRAMME

Why in news?
India has invited Saudi participation in Indian Strategic Petroleum Reserve (SPR) Programme.

SPR programme:
To ensure energy security, the Government of India had decided to set up 5 million metric tons (MMT) of strategic crude oil storages at three locations namely, Visakhapatnam, Mangalore and Padur (near Udupi). These strategic storages would be in addition to the existing storages of crude oil and petroleum products with the oil companies and would serve as a cushion during any external supply disruptions.

- In the 2017-18 budget, it was announced that two more such caverns will be set up Chandikhole in Jajpur district of Odisha and Bikaner in Rajasthan as part of the second phase.
- The construction of the Strategic Crude Oil Storage facilities is being managed by Indian Strategic Petroleum Reserves Limited (ISPRL), a Special Purpose Vehicle, which is a wholly owned subsidiary of Oil Industry Development Board (OIDB) under the Ministry of Petroleum & Natural Gas.

Need for strategic oil reserves:

In 1990, as the Gulf war engulfed West Asia, India was in the throes of a major energy crisis. By all accounts India's oil reserves at the time were adequate for only three days. While India managed to avert the crisis then, the threat of energy disruption continues to present a real danger even today.

- It is unlikely that India's energy needs will dramatically move away from fossil fuels in the near future. Over 80% of these fuels come from imports, a majority of which is sourced from West Asia. This is a major strategic risk and poses a massive financial drain for an embattled economy and its growing current account deficit.
- To address energy insecurity, the government mooted the concept of strategic petroleum reserves in 1998. Today, with India consuming upwards of four million barrels of crude every day, the case for creating such reserves grows stronger.

In January 2016, India signed a deal with the United Arab Emirates that allows the Gulf OPEC country to fill half of the underground crude oil storage facility of ISPRL at Mangalore. Therefore, the UAE's Abu Dhabi National Oil Company will store about 6 million barrels of oil at Mangalore.

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CYBER SECURITY INCIDENTS

Why in news?
Over 50,000 cyber security incidents were observed in the country during 2017, as per CERT- In data. The types of cyber security incidents included phishing, scanning/probing, website intrusions and defacements, virus/malicious code, ransomware and denial of service attacks etc.

Government action
The government has taken a number of legal, technical and administrative measures to prevent incidents of cyber crime.

- These include enactment of the IT Act, 2000 that has adequate provisions for dealing with prevalent cyber crimes and establishment of National Critical Information Infrastructure Protection Centre (NCIIPC) for protection of critical infrastructure in the country.

> ➢ Besides, cyber crime cells have been set up in all states and union territories for reporting and investigation of cyber crime cases.

NCIIPC:
National Critical Information Infrastructure Protection Centre (NCIIPC) is an organisation created under the Information Technology Act, 2000. It is designated as the National Nodal Agency in respect of Critical Information Infrastructure Protection.

NCIIPC has broadly identified the following as 'Critical Sectors':
- Power & Energy.
- Banking, Financial Services & Insurance.
- Telecom.
- Transport.
- Government.
- Strategic & Public Enterprises.

Critical information infrastructure
The Information Technology Act, 2000 defines Critical Information Infrastructure (CII) as "those computer resource, the incapacitation or destruction of which, shall have debilitating impact on national security, economy, public health or safety".

SCIENCE AND TECHNOLOGY

WFIRST

Why in news?
The White House budget proposal has called for the cancellation of the Wide Field Infrared Survey Telescope (WFIRST). WFIRST was tentatively scheduled to launch in the mid-2020s, to become NASA's next "flagship mission," a classification applied to large-scale missions with broad science objectives. Other NASA flagship missions include the Hubble Space Telescope, the Chandra X-Ray Telescope, and the upcoming James Webb Space Telescope.

Details about the mission
It is a NASA observatory designed to settle essential questions in the areas of dark energy, exoplanets, and infrared astrophysics.
> ➢ The Wide Field Instrument will have a field of view that is 100 times greater than the Hubble infrared instrument, capturing more of the sky with less observing time.
> ➢ As the primary instrument, the Wide Field Instrument will measure light from a billion galaxies over the course of the mission lifetime.
> ➢ The Coronagraph Instrument will perform high contrast imaging and spectroscopy of dozens of individual nearby exoplanets.

MALACIDINS

What is it?

Researchers have discovered a new class of antibiotics, which they have named malacidins, which can be extracted from soil bacteria (basically in dirt) that are notoriously difficult to culture in labs and study.

Significance
The world is facing an epidemic of infections that no longer respond well to the drugs used to treat them—also known as super bugs. Malacidins may be able to attack and kill many types of super bugs. The new antibiotics fought off many common infections in lab and mice tests, eliminating some microbes that have become resistant to existing antibiotics.

HYPERLOOP BETWEEN MUMBAI AND PUNE
The Virgin Group has signed an "intent agreement" with Maharashtra to build a hyperloop transportation system between Mumbai and Pune, which aims to reduce the travel time between the two mega cities

What is hyperloop transportation system?
It is a transportation system where a pod-like vehicle is propelled through a near-vacuum tube connecting cities at speeds matching that of an aircraft. The hyperloop concept is a brainchild of Tesla founder Elon Musk. The hyperloop system is being designed to transport passengers and freight.

How it operates?
In hyperloop transporation, custom-designed capsules or pods are expected to zip smoothly through continuous steel tubes which are held at partial vacuum. The pod which sandwiches the passenger compartment between an air compressor upfront and a battery compartment in the rear is supported by air caster skis at the bottom.
  ➢ The skis float on a thin layer of air provided under high pressure, eliminating rolling resistance and allowing for movement of the pods at high speeds.
  ➢ These capsules are expected to be driverless with estimated speeds of 1,000 km/h.
  ➢ Linear induction motors that are placed along the tube control the speed of the pod.
  ➢ Electronically-assisted acceleration and braking determines the speed of the capsule.

SUPER CRITICAL CARBON DI OXIDE BRAYTON TEST LOOP FACILITY
Why in news?
Indian scientists have developed a super critical carbon di oxide Brayton test loop facility that would help generate clean energy from future power plants including solar thermal. This next generation technology loop was developed indigenously by Indian Institute of Science, Bangalore. The facility is part of the

Indo-US consortium — Solar Energy Research Institute for India and the United States (SERIIUS).

Super critical carbon dioxide
The term "supercritical" describes the state of carbon dioxide above its critical temperature of 31°C and critical pressure of 73 atmospheres making it twice as dense as steam.

About the technology:
This is India's first test-bed for next generation, efficient, compact, waterless super critical carbon dioxide Brayton cycle test loop for power generation. The technology is perhaps the first test loop coupled with solar heat source in the world.
- This test loop is designed to generate the necessary data for future development of scaled up S-CO2 power plants, which would require overcoming several technological challenges –developing critical components such as the turbine, compressor and heat exchangers that can work at the desired pressure and temperature ranges and using materials that can withstand these conditions.

Significance of this technology:
The efficiency of energy conversion could be significantly increased by as much as 50% or more if S-CO2 is operated in a closed loop Brayton cycle. Besides increasing power generation and making the process more efficient, there are other advantages of using this new technology. Smaller turbines and power blocks can make the power plant cheaper, while higher efficiency would significantly reduce CO2 emissions for fossil fuel based plants. Moreover, if the power plant used solar or nuclear heat source, it would mean higher capacity at lower operating costs.

'DHANUSH' BALLISTIC MISSILE
Nuclear-capable 'Dhanush' ballistic missile was recently test fired.
- It is a surface-to-surface missile. It has a strike range of 350 km.
- It is a naval variant of the indigenously-developed 'Prithvi' missile.
- It's capable of carrying a payload of 500 kg and hitting both land and sea-based targets.
- The single-stage, liquid-propelled 'Dhanush', has already been inducted into the defence services.
- It is one of the five missiles developed by the Defence Research and Development Organisation (DRDO) under the Integrated Guided Missile Development Programme (IGMDP).

HEAVY WATER BOARD

Why in news?

Heavy Water Board has signed a collaborative agreement with M/s Clearsynth, Mumbai for sale of 20 tonnes of Heavy Water in a year for development of deuterium labeled compounds, NMR Solvents, d-labeled Active Pharma Ingredients (APIs). This marks the beginning of an important era in the annals of Indian Nuclear industry leading to societal benefits for the masses.

Heavy water board:

Heavy Water Board (HWB) is a constituent unit under the Department of Atomic Energy. The organisation is primarily responsible for production of Heavy Water (D2O) which is used as a 'moderator' and 'Coolant' in nuclear power as well as research reactors. Other than Heavy Water, HWB is also engaged with production of different types of nuclear grade solvents and extraction of rare materials.

What is Heavy Water?

Heavy water or deuterium oxide (D2O) is a form of water that contains a large amount of the hydrogen isotope deuterium which is also known as heavy hydrogen. Deuterium differs from the hydrogen which is usually found in water. Heavy water may be deuterium protium oxide (DHO) or deuterium oxide (D2O). The increase in mass due to the presence of deuterium gives it a different chemical and physical property compared to normal water.

Applications: Heavy water is used in certain types of nuclear reactors, where it acts as a neutron moderator to slow down neutrons. The different applications and uses of heavy water are:
- Nuclear magnetic resonance.
- In Organic chemistry.
- Fourier transform spectroscopy.
- Neutron moderator.
- Neutrino detector.
- Metabolic rate testing in physiology and biology.
- Tritium production.

PRITHVI-II

Nuclear-capable medium range surface to surface missile Prithvi-II was successfully test-fired recently off the Odisha coast.
- Prithvi-II, which has a strike range of 350 km, is capable of carrying 500-1,000 kg of warheads and is thrusted by liquid propulsion twin engines.
- Prithvi is India's first indigenously-built ballistic missile.
- It is one of the five missiles being developed under the country's Integrated Guided Missile Development Programme.

SARAS

Why in news?
The indigenous light transport aircraft (LTA) Saras PT1N recently completed the second set of test flights.

Details
SARAS PT1N is first Indian multi-purpose civilian aircraft in light transport aircraft category. It is an indigenous aircraft developed by the National Aeronautics Laboratories (NAL), which is overseen by the Council of Scientific & Industrial Research (CSIR).

ENVIRONMENT

MASSIVE RESERVES OF MERCURY IN ARCTIC PERMAFROST
Scientists have discovered that permafrost in the northern hemisphere stores largest amounts of natural mercury and a warming climate could release large amounts of this dangerous toxin that may cause neurological effects in humans and animals.

Mercury
Mercury is a chemical element with symbol Hg and atomic number 80. It is commonly known as quicksilver and was formerly named hydrargyrum. It is the only metallic element that is liquid at standard conditions for temperature and pressure. The only other element that is liquid under these conditions is bromine.

Mercury is a very rare element in the Earth's crust. It accounts for only about only 0.08 parts per million (ppm). It is a relatively poor conductor of heat. Most metals are excellent thermal conductors.

Mercury is used in thermometers, barometers, manometers, sphygmomanometers, float valves, mercury switches, mercury relays, fluorescent lamps and other devices. It is also used in lighting: electricity passed through mercury vapor in a fluorescent lamp produces short-wave ultraviolet light which then causes the phosphor in the tube to fluoresce, making visible light.

Effects of Mercury on Health:
Exposure to mercury – even small amounts – may cause serious health problems, and is a threat to the development of the child in utero and early in life. It may have toxic effects on the nervous, digestive and immune systems, and on lungs, kidneys, skin and eyes. It is considered by WHO as one of the top ten chemicals or groups of chemicals of major public health concern. People are mainly exposed to methylmercury, an organic compound, when they eat fish and shellfish that contain the compound.

In conclusion

Mercury pollution is a global problem that requires global action. It moves with air and water, transcends political borders, and can be transported thousands of miles in the atmosphere. The Minamata Convention on Mercury is an opportunity for the global community to address this mounting problem before it gets worse.

BENGALURU: CAPE TOWN IN THE MAKING

What's the issue?

As per a report based on "UN-endorsed projections" published by the BBC, Bengaluru city of India is "most likely" to be the first Indian urban settlement that will run out of drinking water, just like South Africa's City of Cape Town, which is facing unprecedented water supply shortage in history. Sau Paulo, Brazil's financial capital is on top of the list. The report ranks Bengaluru second in the list of 11 world cities

What are possible causes?

Bengaluru is a victim of urbanisation madness. The city is experiencing unprecedented rapid urbanisation and sprawl in recent times due to unplanned unrealistic concentrated developmental activities. This has posed "serious challenges to the decision-makers in the city planning and management process involving a plethora of serious challenges such as loss of green cover and water bodies, climate change, enhanced greenhouse gases (GHG) emissions, lack of appropriate infrastructure, traffic congestion, and lack of basic amenities (electricity, water, and sanitation) in many localities, etc."

The report notes that not a "single" lake in the city has water fit for either drinking or bathing. Lakes of the city, including Bellandur, often make news for catching fire. Between 1973 and 2016, the city witnessed a 1005% increase in "concretization or paved surface increase". Since 1981, the city has spread and has also experienced dramatic decadal population growth.

What about other cities?

A world bank report last year had said that at least 21 Indian cities were moving towards zero groundwater level by 2020. As per a report by World Resources Institute, as much as 54% of India's area is under "high" to "extremely high water stress". Experts believe that 40% of people in India may not get to drink water by 2030.

INDIA STATE OF FOREST REPORT (ISFR) 2017

Released by: The environment ministry

New in the report

The 15th ISFR report, which is published every two years, for the first time contains information on

- ➢ decadal change in water bodies in forest during 2005-2015
- ➢ forest fire
- ➢ production of timber from outside forest
- ➢ state wise carbon stock in different forest types and density classes.

Highlights of the report:
- India's forest cover has increased over the last two years and the total forest cover at 7,08,273 sq km which is 21.54% of the country's geographical area, based on satellite data and ground truthing.
- Andhra Pradesh, Karnataka, Kerala, Odisha and Telangana saw increase in their green footprint during the last two years though there is a worrying decline in six northeastern states, including the eastern Himalayas.
- While overall green cover, including tree patches outside recorded forest areas, reported 1% increase over the last assessment year in 2015, the quality of forests remain a hotly debated subject.
- Taking into account the density (canopy covering branches and foliage formed by the crowns of trees), forest cover is divided into 'very dense', 'moderately dense' and 'open' forest. The 'very dense' forest cover has increased over the last assessment of 2015, but the 'moderately dense' category reported a decline.
- The report also shows an increase in total mangrove cover. All the 12 mangrove states have shown a positive change in the mangrove cover, as compared to the last assessment.
- There was an increase in the extent of water bodies over the decade (2005-15) with all states and Union Territories (UTs) showing an increase except Arunachal Pradesh, Uttar Pradesh and Haryana. Maharashtra, Gujarat and Madhya Pradesh figure as the top three states reporting maximum increase in areas of water bodies including lakes and wetlands.
- Madhya Pradesh has the largest forest cover of 77,414 sq km in the country in terms of area, followed by Arunachal Pradesh and Chhattisgarh.
- In terms of percentage of forest cover with respect to the total geographical area, Lakshadweep with (90.33%) has the highest forest cover, followed by Mizoram (86.27%) and Andaman & Nicobar Island (81.73%).

EV POLICY DROPPED
Why in news?
The government has decided against formulating an electric vehicle (EV) policy in an apparent U-turn from its position so far, providing a breather to many carmakers that are unprepared for an abrupt shift to the clean-fuel technology. The existing FAME (incentive) scheme may continue for another two years.

FAME India scheme:

With an aim to promote eco-friendly vehicles, the government had launched the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME-India) scheme in 2015.

Aim: To incentivize all vehicle segments, including two-wheelers, three wheeler auto, passenger four-wheeler vehicle, light commercial vehicles and buses. The scheme covers hybrid and electric technologies like a strong hybrid, plug-in hybrid and battery electric vehicles.

FAME India is a part of the National Electric Mobility Mission Plan being administered by the Heavy Industries Ministry.

In conclusion
Electric vehicles (EVs) seem to be gaining in prominence as part of the renewable energy zeitgeist. However, mainstreaming electric vehicles will require an overhaul of the country's energy and transport infrastructure. For example, EV charging stations will have to be set up on a war footing, and electricity generation will have to improve significantly. EV technology (especially the battery) will have to become much cheaper before it can perform well in a price-sensitive market like India.

WORLD ENVIRONMENT DAY 2018
India is the global host of 2018 World Environment Day which will take place on June 5, 2018.

Theme: "Beat Plastic Pollution".

Backgrounder: World Environment Day is a UN Environment-led global event, the single largest celebration of our environment each year, which takes place on June 5 and is celebrated by thousands of communities worldwide. Since it began in 1972, it has grown to become a global platform for public outreach that is widely celebrated across the globe.

WORLD SUSTAINABLE DEVELOPMENT SUMMIT
Venue: New Delhi.

Details
The World Sustainable Development Summit (WSDS), TERI's flagship event, has been conceptualized as a single platform to accelerate action towards sustainable development and especially climate change.
The event was earlier known as the Delhi Sustainable Development Summit (DSDS).

About TERI:
The Energy and Resources Institute (TERI) is a leading think tank dedicated to conducting research for sustainable development of India and the Global South. TERI was established in 1974 as an information centre on energy issues. However, over the following decades, it made a mark as a research institute, whose policy and technology solutions transformed people's lives and the environment.

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13^(th) Feb to 25^(th) Feb

Theme: 'Partnerships for a Resilient Planet'.

The WSDS series seeks to bring together the finest minds and leading thinkers of the world to focus attention on the challenge of sustainable development and has emerged as a landmark event addressing issues pertinent to the future of humanity.

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In conclusion

India is ranked 116 out of 157 nations on a global index that assesses the performance of countries towards achieving the ambitious sustainable development goals (SDGs), behind countries such as Nepal, Iran, Sri Lanka, Bhutan and China.

There is need for urgent action on the part of India in making sustainable development a reality both within and beyond its border. Also, if the world is to achieve the SDGs, all countries must take up the goals as part of their national development strategies, and ensure that they take responsibility for their impact on the rest of the world.

BOTANICAL SURVEY OF INDIA

Why in news?
Botanical Survey of India (BSI) and Natural History Museum (NHM), UK have signed a Memorandum of Understanding for cooperation in the field of genetic/taxonomic studies. NHM will help BSI in capacity building in areas of systematic botany and long-term conservation of plant genetic resources in India.

BSI:
The Botanical Survey of India (BSI) was established in 1890 with the objectives of exploring the plant resources of the country and identifying plant species with economic virtue. In 1954, the Government reorganised the BSI with the objectives of:
- Undertaking intensive detailed floristic surveys from various dimensions
- Collecting, identifying and distributing materials that may be of use to educational and research institutions.
- Acting as the custodian of authentic collections in well planned herbaria and documenting plant resources in the form of local, district, state and national flora.

SECURITY CHALLENGES

PASCHIM LEHAR

iasshiksha.blog   iasshiksha.com   PHONE:9986102277

'Paschim Lehar', a tri-service maritime exercise, is being held off India's western coast.

Objective: To build interoperability.

This exercise includes participation of a large number of ships, submarines and aircraft

CRIME AND CRIMINAL TRACKING NETWORK AND SYSTEMS (CCTNS)

Why in news?
Punjab government has launched the Crime and Criminal Tracking Network and Systems (CCTNS), a project to keep digitised records of FIRs and information on crimes and criminals.

What is CCTNS project?
Crime and Criminal Tracking Network and Systems (CCTNS) is a project initiated in June 2009 which aims at creating a comprehensive and integrated system for enhancing the efficiency and effectiveness of policing at the Police Station level. This will be done through adoption of principles of e-Governance, and creation of a nationwide networked infrastructure for evolution of IT-enabled state-of-the-art tracking system around "investigation of crime and detection of criminals". CCTNS is a Mission Mode Project (MMP) under the National e-Governance Plan of Govt. of India.

What it does?
The Project will interconnect about 15000 Police Stations and additional 5000 offices of supervisory police officers across the country and digitize data related to FIR registration, investigation and charge sheets in all Police Stations.

It will not only automate Police functions at Police station and higher levels but will also create facilities and mechanism to provide public services like registration of online complaints, ascertaining the status of case registered at the police station, verification of persons etc. In 2015, an additional objective of establishing a basic platform for an Inter-operable Criminal Justice System (ICJS) was added to the Project.

Benefits:
The Full implementation of the Project with all the new components would lead to a Central citizen portal having linkages with State level citizen portals that will provide a number of citizen friendly services like Police Verification for various purposes including passport verification, reporting a crime including cyber-crime and online tracking of the case progress etc.

The project will enable National level crime analytics to be published at increased frequency, which will help the policy makers as well as lawmakers in

taking appropriate and timely action, it will also enable Pan-India criminal/accused name search in the regional language for improved inter-state tracking of criminal movement. This would lead to development of a national database of crimes and criminals.

The police of any state barely "talked" among themselves, or with the police of other states. Each police station was an island, where records were maintained manually. The National Crime Records Bureau and State Crime Records Bureaus were initial steps towards storage, sharing and accessing data, but the process was technologically primitive and cumbersome. A seamless, technology-driven network in which any police station could "talk" to another police station in real time, was needed.