



IAS 2020-21

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ALL INDIA SURVEY ON HIGHER EDUCATION (AISHE) 2018-19

The Union Ministry of Human Resource Development released the All India Survey on Higher Education (AISHE) 2018-19. Annual publication started in 2010-11.

Main findings of the survey:

1. The top 8 States in terms of highest number of colleges in India are Uttar Pradesh, Maharashtra, Karnataka, Rajasthan, Haryana, Tamil Nadu, Gujarat and Madhya Pradesh.
2. Bangalore tops in number of colleges with 880 colleges
3. College density, i.e. the number of colleges per lakh eligible population (age-group 18-23 years) varies from 7 in Bihar to 53 in Karnataka as compared to All India average of 28.
4. 60.53% Colleges located in Rural Area
5. 11.04% Colleges exclusively for Female
6. 77.8% Colleges are privately managed
7. 64.3% are Private-unaided and 13.5% Private-aided
8. Total enrolment-37.4 million in which Female constitute 48.6% of the total enrolment.
9. Gross Enrolment Ratio (GER) in Higher education increased from 25.8 in 2017-18 to 26.3 in 2018-19 (male-26.3%, females-26.4%, SC-23%, ST-17.2%)
10. National GER of 26.3%.
11. UP comes at number one with the highest student enrolment followed by Maharashtra and Tamil Nadu
12. Highest share of foreign students come from: Nepal -26.88% followed by, Afghanistan (9.8%), Bangladesh (4.38%), Sudan (4.02%), Bhutan constitutes (3.82%) and Nigeria (3.4%).
13. Pupil Teacher Ratio (PTR) in Universities & Colleges-29.
14. PTR for Universities and its Constituent Units is 18 for regular mode.

LIQUID FUNDS

The Securities and Exchange Board of India (SEBI) has made it mandatory for Liquid funds to hold at least 20% of its net assets in liquid assets while mandating an exit load on investors that exit within seven days of making an investment.

	LIQUID FUND	ULTRA S-T FUND
Maturity Period	Invests in security with residual maturity up to 91 days.	Can invest in security with a maturity period higher than 91 days.
Risk Factor	Less risky as compared to Ultra Short-Term Fund due to lower maturity period	Protects against interest rate risk, but is not immune to market fluctuations
Expense	No exit load	Exit load is sometimes charged which makes Ultra Short-Term Funds more stable
Advantage	Better in terms of liquidity	Primarily give better returns compared to liquid funds

Liquid Funds

- Liquid funds are a type of **mutual funds** that invest in securities with a residual maturity of up to 91 days.
- Assets invested are not tied up for a long time as liquid funds do not have a lock-in period.
- They are more profitable for investors, than Ultra Short term funds.

1. Liquid funds belong to the debt category of mutual funds
2. Invest in very short-term market instruments like treasury bills, government securities and call money
3. Higher than savings bank account returns and easy liquidity
4. **New Norms:** Liquid funds shall hold at least 20% of their net assets in liquid assets and liquid assets shall include cash, government securities, T-bills and repo on government securities
5. Liquid assets falls below 20% of net assets
6. Fund house will first have to meet the 20% norm before making any further investments
7. Barred liquid funds and overnight funds from parking money, pending deployment, in short-term deposits of scheduled commercial banks and also debt securities having structured obligations and/or credit enhancements
8. Debt securities with government guarantee have been excluded from such restriction
9. New norms effective from April 1, 2020.

SHODH SHUDDHI

"ShodhShuddhi" is a Plagiarism Detection Software (PDS) launched by the Ministry of Human Resource Development.

It will be implemented by INFLIBNET, an Inter University Centre (IUC) of UGC to improve the quality of research outcome by ensuring the originality of ideas and publication of the research scholars. Initially about 1000 Universities are being provided with this service.

Information and Library Network (INFLIBNET) Centre:

INFLIBNET Centre is an autonomous Inter-University Centre of the University Grants Commission (UGC) of India. It is a major National Programme initiated by the UGC in March 1991 with its headquarters at Gujarat University Campus, Ahmedabad. INFLIBNET is involved in modernizing university libraries in India using the state-of-art technologies for the optimum utilisation of information.

NONYLPHENOL (NP)

It is a harmful chemical found in detergents. It is banned in several countries or is being phased out owing to its harmful effects on humans and aquatic organisms.

1. Persistent, toxic, bio-accumulative chemical acts as a hormone disruptor
2. Can be responsible for a number of human health effects
3. Exposure through water, soil and food crops may result in a burning sensation, cough, laboured breathing, sore throat, unconsciousness, skin irritation and burns
4. May cause abdominal pain, diarrhoea, nausea
5. Toxic for aquatic animals
6. Amphiphilic properties used as a surfactant in the textile industry.
7. BIS has set the standard of phenolic compounds for drinking water (0.001 mg/L) and surface water (5.0 mg/L).
8. Unlike other countries, India does not have specific standards for Nonylphenol in drinking water and surface water.

HOW DETERGENTS AND SURFACTANTS WORK

1. Detergents and soaps are used for cleaning because pure water can't remove oily, organic soiling.
2. Soap cleans by acting as an **emulsifier**.
3. Basically, soap allows oil and water to mix so that oily grime can be removed during rinsing.
4. Detergents are primarily surfactants, which could be produced easily from petrochemicals.
5. Surfactants lower the surface tension of water, essentially making it 'wetter' so that it is less likely to stick to itself and more likely to interact with oil and grease.
6. Modern detergents contain more than surfactants. Cleaning products may also contain enzymes to degrade protein-based stains, bleaches to de-color stains and add power to cleaning agents, and blue dyes to counter yellowing.

KODIAKKARAI WILD LIFE SANCTUARY

A unique exercise of rehabilitating deer population has been started in the Kodiakkarai Wild Life sanctuary in Tamilnadu.

1. The deers are being brought up from the protected environment in the Sivagangai park. Also known as Point Calimere Wildlife and Bird Sanctuary (**PCWBS**)
2. Protected area along Palk Strait where it meets the Bay of Bengal at Point Calimere (Kodiakkarai) at the tip of Nagapattinam District
3. Created in 1967 for conservation of near threatened blackbuck antelope, an endemic mammal species of India.

COMMON DIGITAL PLATFORM FOR ISSUANCE OF ELECTRONIC CERTIFICATES OF ORIGIN

The Ministry of Commerce & Industry launched a common digital platform for the issuance of electronic Certificates of Origin (CoO).

1. Single access point for all exporters, for all FTAs/PTAs and for all agencies concerned.
2. Authorities of partner countries will be able to verify the authenticity of certificates from the website
3. Provides administrative access to Department of Commerce for reporting and monitoring purposes.
4. India has 15 Free Trade Agreements under which Indian exporters avail reduced import tariffs
5. To avail this benefit, the exporters must provide a preferential CoO
6. 7 lakh certificates are issued annually by designated agencies to certify that exported goods are made in India
7. Some designated agencies for CoO issuance are EIC, Directorate General of Foreign Trade (DGFT), Marine Products Export Development Authority (MPEDA), Textile Committee and Tobacco Board.

LAWS RELATED TO ENVIRONMENTAL PROTECTION

1. The Wildlife (Protection) Act, 1972
2. Water (Prevention and Control of Pollution) Act 1974
3. Forest (Conservation) Act, 1980
4. Air (Prevention and Control of Pollution) Act, 1981
5. Environment (Protection) Act, 1986.

Constitutional Provisions

Article-48-A of the constitution provides:

"The state shall endeavour to protect and improve the environment and to safeguard forest and wildlife of the country."

Article 51-A (g) Provides:

It shall be duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures."

SHONDOL DANCE

Ladakhi Shondol dance has created history by breaking into the Guinness book of world records as the largest Ladakhi dance.

1. 408 women artists performed on occasion of Annual Naropa Festival, ongoing Buddhist carnival near the 11th-century world-famous Hemis Monastery in Ladakh.
2. known as the royal dance of Ladakh
3. Performed by Takshoma or women dancers to praise the King of Ladakh on special occasion

OTHER LADDAKHI DANCES

1. Jabro dance
2. Drugpa-rches
3. Dances of the lamas
4. Yak dance
5. Tukhatanmo
6. Bagstonrches
7. Shon dance
8. Surahi dance
9. Koshan dance

HALDIBARI- CHILAHATI RAILWAY LINK

Chilahati railway link upgradation work was inaugurated to connect West Bengal with Bangladesh.

1. 7.5-kilometre long railway track, providing connectivity from West Bengal into Assam via Bangladesh.
2. Haldibari- Chilahati railway track is part of the broad gauge main route from Kolkata to Siliguri during British undivided Trains from Bangladesh to Darjeeling via Siliguri operated till 1965 which stopped functioning after the 1965 Indo-Pak war.

'UMMID' INITIATIVE

Government launches 'UMMID' initiative to tackle inherited genetic diseases of new born babies. UMMID (Unique Methods of Management and treatment of Inherited Disorders) initiative by Department of Biotechnology. Motto is 'Prevention is better than Cure'.

1. Aims to create awareness about genetic disorders amongst clinicians and establish molecular diagnostics in hospitals so that the fruits of developments in medical genetics reach the patients in India.
2. **UMMID initiative aims to:** NIDAN (National Inherited Diseases Administration) Kendras to provide counselling, prenatal testing and diagnosis, management, and multidisciplinary care in Government Hospitals wherein the influx of patients is more
3. To appoint skilled clinicians in Human Genetics
4. Undertake screening of pregnant women and new born babies for inherited genetic diseases in hospitals at aspirational districts
- 5.

BLACK CARBON

According to a recent study published, black carbon particles emitted by the vehicular exhaust and coal-fired power plants, have been detected on the foetus-facing side of the placenta. Affect the overall development of the unborn baby.

1. Concentration of black carbon particles was highest in the placentas of women who are most exposed to airborne pollutants

2. Inhalation of these particles by the mother gets translocated from the mothers' lungs to the placenta, resulting in life-long changes to the development of the baby along with permanently damaging the lung tissues
3. There is a link between exposure to dirty air and increased cases of miscarriages, premature births, and low birth weights which in turn increases the chances for diabetes, asthma, stroke, heart disease and a lot of other conditions, has been established
4. Black Carbon consists of pure carbon in several linked forms which is formed through the incomplete combustion of fossil fuels, biofuel, and biomass, and is emitted in both anthropogenic and naturally occurring soot.
5. Pollutant known to aggravate breathing disorders
6. BC particles strongly absorb solar and terrestrial radiation and heats up the atmosphere it can upset the monsoon system
7. If deposited on snow, it could accelerate the heating of snow and quicken the melting of glaciers.

MICROHYLA EOS

1. It is a newly discovered species of frog from Arunachal Pradesh.
2. Discovered from riparian habitats in a primary evergreen forest in the **Namdapha Tiger Reserve** of the state, which is also the eastern-most protected area in the country
3. Arunachal Pradesh is popularly known as 'the land of rising sun' or 'the land of dawn-lit mountains', the new species has been named as **eos**, after the mythological Greek goddess of dawn
4. Microhyla are a group of narrow-mouthed frogs that is primarily and widely distributed in Asia. Commonly known as 'Rice Frogs' or 'Chorus Frogs', the genus currently comprises of 49 recognised species.

AYUSHMAN BHARAT-PRADHAN MANTRI JAN AROGYA YOJANA (PM-JAY)

Ayushman Bharat - the Pradhan Mantri Jan Arogya Yojana has completed one year of its launch.

1. Launched on September 23, 2018 from Ranchi, Jharkhand
2. Main aim is to provide universal health care to the poor
3. Provides health cover of five lakh rupees annually
4. Benefiting more than ten crore poor families
5. Achievements during last one year: more than 46 lakh beneficiaries availed treatment under this worth ₹7,500 crore with 60% spent on tertiary care
6. Over eighteen thousand hospitals are providing services, more than 50 per cent are private hospitals.

CENSUS 2021

1. The 2021 census will be conducted through a mobile phone application, moving away from the traditional pen and paper.
2. The census will have its reference date as March 1, 2021, but for snow-bound Jammu and Kashmir, Himachal Pradesh and Uttarakhand it will be October 1, 2020.
3. NPR is different from the census and not linked to NRC
4. For NPR person has to reside in a local area for the past six months or more or a person who intends to reside in that area for the next six months or more.

GLOBAL INTERNET FORUM TO COUNTER TERRORISM (GIFCT)

Led by Presidents of New Zealand and France, the members of GIFCT recently met at the UN General Assembly to discuss the progress on the steps taken to implement **Christchurch Call to Action**.

1. GIFCT was established in July 2017 as a group of companies, dedicated to disrupting terrorist abuse of members' digital platforms
2. Original Forum was led by a rotating chair drawn from the founding four companies—Facebook, Microsoft, Twitter and YouTube—and managed a program of knowledge-sharing, technical collaboration and shared research
3. GIFCT goals are to Improve capacity of a broad range of technology companies, independently and collectively, to prevent and respond to abuse of their digital platforms by terrorists and violent extremists
4. Enable multi-stakeholder engagement around terrorist and violent extremist misuse of the internet and encourage stakeholders to meet key commitments consistent with the GIFCT mission

DADASAHEB PHALKE AWARD

The country's highest film honour, the Dadasaheb Phalke Award, will be presented this year to Amitabh Bachchan. The award comes in the year that marks Mr. Bachchan's golden jubilee in cinema.

1. DadasahebPhalke award -India's highest award in cinema
2. First presented in 1969 to Devika Rani, first lady of Indian cinema
3. Dadasaheb Phalke directed India's first full-length feature film, **Raja Harishchandra** (1913)
4. Regarded as "the father of Indian cinema."

GANDHI SOLAR PARK

India's Prime Minister Narendra Modi, along with UN chief Antonio Guterres and other world leaders, inaugurated the Gandhi Solar Park and Gandhi Peace Garden at the headquarters of the global body.

At a contribution of about USD 1 million, India has gifted solar panels that have been installed on the roof of the UN Headquarters here, one panel each for every 193 UN member states.

On the occasion, a special UN Postage stamp on Gandhi's 150 years was also released.

KRISHI KISAN APP

Union Minister for Agriculture and Farmers Welfare launched 'Krishi Kisan App for Geo Tagging' in New Delhi.

1. Provide farmers the information of best demonstration of high-yielding crops and seeds in their nearby area
2. Help in geo-tagging and geo-fencing of crop and give weather forecast message to farmers.

PAIKA REBELLION

President Ram Nath Kovind to lay the foundation of a memorial dedicated to the 1817 Paika Rebellion.

1. Paikas were recruited since the 16th century by kings in Odisha from a variety of social groups to render martial services in return for rent-free land (nish-kar jagirs) and titles. They were the traditional land-owning militia of Odisha and served as warriors
2. When East India Company overran most of Odisha in 1803, the Raja of Khurda lost his primacy and the power and prestige of the Paikas went on a decline
3. Commission under Walter Ewer to look into the issue who recommended that the hereditary rent-free lands granted to the Paikas be taken over by the British administration and this recommendation was zealously adhered to.
4. Paikas revolted against the British
5. Bakshi Jagabandhu Bidyadhar the highest-ranking military general of King of Khorda Mukund Dev II, led the Paikas to join the uprising
6. Rebellion had several other underlying causes – like the rise in the price of salt, abolition of the cowrie currency for payment of taxes and an overtly extortionist land revenue policy
7. Company struggled to respond they managed to put down the rebellion by May 1817
8. Many of the Paik leaders were hung or deported
9. Jagabandhu surrendered in 1825.

NATIONAL WATER MISSION AWARDS- 2019

National Water Mission, Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti has initiated the 'National Water Mission Awards' to recognize excellence in water conservation, efficient water use and sustainable water management practices.

NWM has 5 goals and 39 strategies prescribed in the Mission Document. One of the strategies of NWM under Goal IV is to incentivize the organization/ companies through awards for water conservation and efficient use of water.

The awards are given in ten categories defined under five goals of **NWM**. The categories are as follow:

1. Comprehensive Water Data Base in Public Domain.
2. Assessment of the impact of Climate Change on Water Resources.
3. Promotion of citizen and state action for water conservation, augmentation and
4. Focused attention to vulnerable areas including over-exploited area.
5. Increasing Water use efficiency by 20% (Local Individuals/Farmers/Citizens)
6. Increasing Water use efficiency by 20% (Water Users Associations/ Self Help Groups/ Resident Welfare Associations).
7. Increasing Water use efficiency by 20% (Public Agencies –ULBs/Cities, Govt Organisations).
8. Increasing Water use efficiency by 20% (Industries/Corporate).
9. Increasing Water use efficiency by 20% (Small and Medium Enterprises).
10. Promotion of basin level integrated water resources management.

NATIONAL ACTION PLAN ON CLIMATE CHANGE (NAPCC)

The Action Plan was released on 30th June 2008 with 8 national missions. The Prime Minister's Council on Climate Change is in charge of the overall implementation of the plan.

1. National Solar Mission
2. National Mission for Enhanced Energy Efficiency

3. National Mission on Sustainable Habitat
4. National Water Mission
5. National Mission for Sustaining the Himalayan Ecosystem
6. National Mission for a “Green India”
7. National Mission for Sustainable Agriculture
8. National Mission on Strategic Knowledge for Climate Change

QUANTUM SUPREMACY

A scientific paper by Google has claimed that quantum processors have "reached the regime of quantum supremacy".

1. Quantum supremacy, is the point at which quantum computers can solve problems that are practically unsolvable for “classical” (non-quantum) computers to complete in any reasonable timeframe
2. At least 49 qubits are required to cross the quantum supremacy line
3. Google research paper claimed that their processor able to perform a calculation in three minutes and 20 seconds that would take today's most advanced classical computer, known as Summit (from IBM), approximately 10,000 years"
4. In 2018 Google unveiled its 72-qubit quantum computer chip Bristlecone
5. Qubits behave very differently to bits in classical computers
6. Bits represent either a “1” or a “0,” and computers read and perform operations on one bit at a time
7. Qubits can represent a combination state made up of both “1” and “0,” due to the peculiar quantum effects in which properties like particle position, direction, and momentum are not well-defined
8. This allows for a system to be in multiple states at the same time, called quantum indeterminacy.

ERSS-112

The Ministry of Home Affairs launched the Emergency Response Support System (ERSS-112) and PRAKHAR street crime patrol van in Delhi.

1. Emergency Response Support System (ERSS-112):helpline system developed as a nationwide single emergency number for emergency services
2. It will phase out the other three emergency helpline numbers
3. Delhi-19th state(UT) who adopted ERSS-112
4. Initially launched in Himachal Pradesh and Nagaland & extended to 16 other states
5. PRAKHAR: street crime patrol van, for patrolling at crime hot spot locations
6. One van will be deployed in each district in Delhi

PM – KISAN SCHEME

The government has opened the Pradhan Mantri KisanSamman Nidhi (PM-Kisan) portal for self-registration by farmers.

1. This move is expected to help farmers in other States whose names have been missed out
2. Many States have been slow in enrolling farmers for various reasons

3. Pradhan Mantri KisanSamman Nidhi is for vulnerable landholding farmer families, having cultivable land upto 2 hectares, will be provided direct income support at the rate of Rs. 6,000 per year
4. Income support will be transferred directly into the bank accounts of beneficiary farmers, in three equal installments of Rs. 2,000 each
5. Complete expenditure of Rs 75000 crore for the scheme will borne by the Union Government in 2019-20
6. Comprises of husband, wife and minor children up to 18 years of age, who collectively own cultivable land up to two hectare as per the land records of the concerned states
7. 12 crore small and marginal farmer families are expected to benefit
8. Similar programmes by states like BhavantarBhuqtan Yojana in Madhya Pradesh was sought to provide relief to farmers by providing the differential between MSPs and market prices
9. The RythuBandhu scheme of the Telangana, ₹4,000 per acre for every season to all the farmers of the state
10. Krushak Assistance for Livelihood and Income augmentation (KALIA) of Odisha is more complicated in design and implementation. It commits to give Rs 5,000 per SMF, twice a year, that is Rs 10,000 a year

PROJECT NETRA

ISRO has initiated 'Project NETRA' – an early warning system in space to detect debris and other hazards to Indian satellites. Project NETRA (Network for space object Tracking and Analysis)

1. ISRO plans to put up many observational facilities: connected radars, telescopes; data processing units and a control centre
2. They can, among others, spot, track and catalogue objects as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km
3. It will give India its own capability in space situational awareness (SSA) like the other space powers — which is used to 'predict' threats from debris to Indian satellites
4. Eventual goal is to capture the GEO, or geostationary orbit, scene at 36,000 km where communication satellites operate
5. Currently, there are 15 functional Indian communication satellites in the geostationary orbit of 36,000 km; 13 remote sensing satellites in LEO of up to 2,000 km; and eight navigation satellites in medium earth orbits.
6. Space junk is an ever-growing problem with more than 7,500 tonnes of redundant hardware now thought to be circling the Earth.

NEW IPCC REPORT WARNS OF DIRE THREAT TO OCEANS

The Intergovernmental Panel on Climate Change (IPCC) released a special report- '**Special Report on the Ocean and Cryosphere in a Changing Climate**'.

1. The report underlines the dire changes taking place in oceans, glaciers and ice-deposits on land and sea.
2. It was prepared following an IPCC Panel decision in 2016 to prepare three Special Reports and follows the Special Reports on Global Warming of 1.5°C, and on Climate Change and Land (SRCCL)
3. Ocean is projected to transition to unprecedented conditions with increased temperatures, further ocean acidification, marine heatwaves and more frequent extreme El Niño and La Niña events

4. Global ocean has warmed unabated since 1970+ and has taken up more than 90% of the excess heat in the climate system
5. Floods will become more frequent and severe in the mountainous and downstream areas of the Indus, Ganges and Brahmaputra.

CARIBBEAN COMMUNITY (CARICOM OR CC)

The Prime Minister of India met with 14 leaders of the **CARICOM** group of countries on the sidelines of the United Nations General Assembly in New York.

1. India has provided immediate financial assistance of USD 1 million to recover from the destruction caused by Hurricane Dorian in the region and the worst-hit island of Bahamas
2. Announced a USD 14 million grant for community development projects in the CARICOM and another 150 million Line of Credit for solar, renewable energy and climate-change-related projects
3. CARICOM is organisation of **fifteen Caribbean nations** and dependencies having primary objectives to promote economic integration and cooperation among its members, to ensure that the benefits of integration are equitably shared, and to coordinate foreign policy
4. It was established in 1973

UNITARY TAXATION SYSTEM FOR MNCs

United Nations Conference on Trade and Development (UNCTAD) in its Trade and Development Report 2019 has recommended for the adoption of a unitary taxation system for the Multi-National Enterprises (MNCs).

1. The proposal is that the profits of MNCs are generated collectively at the group level, hence, unitary taxation should be applied by combining it with a global minimum effective corporate tax rate on all MNE profits.
2. Such an approach would simplify the global taxation system and is expected to increase tax revenues for all countries.
3. Tax-motivated illicit financial flows of MNCs are estimated to deprive developing countries of \$50 billion to \$200 billion a year in terms of the fiscal revenues.
4. United Nations Conference on Trade and Development (UNCTAD) is permanent intergovernmental body established by the United Nations General Assembly in 1964.
5. It is part of the UN Secretariat
6. It reports to the UN General Assembly and the Economic and Social Council has its own membership, leadership, and budget
7. It also measures the progress made in the Sustainable Development Goals, as set out in Agenda 2030
8. Reports published by UNCTAD are:
 - a. Trade and Development Report
 - b. World Investment Report
 - c. Technology and Innovation Report
 - d. Digital Economy Report

IMD WORLD DIGITAL COMPETITIVENESS RANKING 2019

Now in its third year, the IMD World Digital Competitiveness Ranking measures the capacity and readiness of 63 economies to adopt and explore digital technologies as a key driver for economic transformation in business, government and wider society.

1. To evaluate an economy, WDCR examines three factors: Knowledge and capacity to understand and learn the new technologies, the competence to develop new digital innovations; and future readiness
2. India rose from 48th place in 2018 to 44th rank this year
3. US was ranked as the world's most digitally competitive economy, followed by Singapore in the second place. Sweden was ranked third on the list, followed by Denmark and Switzerland in the 4th and 5th place
4. Hong Kong and South Korea entered the top 10 for the first time

KAZIND-2019

It is a joint military exercise between India and Kazakhstan, took place in Pithoragarh district, Uttarkhand from 3-15 October 2019.

1. Focus will be counter terrorism operation
2. Conducted alternatively in Kazakhstan and India every year.

ACCRETION DISC

The black hole's extreme gravity skews light emitted by different regions of the disc, producing the misshapen appearance. Visualization simulates the appearance of a black hole where infalling matter has collected into a thin, hot structure called an accretion disc.

GOLDSCHMIDTITE

It is a **new mineral** that has been discovered recently inside a diamond unearthed from a mine in South Africa. Been found in Earth's Mantle (A part of Interior of the Earth) which covers 80% of earth's volume

1. Comprising high concentrations of niobium, potassium and the rare earth elements lanthanum and cerium
2. Named after the Norwegian scientist Victor Moritz Goldschmidt, who is considered as the founder of Modern Geochemistry.

WORLD TOURISM DAY 2019

This day is commemorated each year on 27 September, with celebrations led by UNWTO. Because the Constitution of the World Tourism Organization was accepted on this day in 1970

GLOBAL TRAVEL AND TOURISM COMPETITIVENESS REPORT 2019

- India has moved up six places to rank 34th on the World Travel and Tourism Competitiveness Index 2019, released by the **World Economic Forum**.
- India was ranked 40th in 2018.
- Published biennially, Travel & Tourism Competitiveness Report and Index benchmarks the Travel & Tourism (T&T) competitiveness of 140 economies.

The 140 economies are ranked in four sub-indexes:

1. Enabling environment

Objectives is to raise awareness about the role of tourism around the world and to promote social, cultural, political and economic values

1. **2019 theme:** Tourism and jobs: a better future for all”
2. UNWTO is responsible for the promotion of responsible, sustainable and universally accessible tourism
3. Members: 158 countries, 6 Associate Members and over 500 Affiliate Members representing the private sector, educational institutions, tourism associations and local tourism authorities
4. Implementation of the Global Code of Ethics for Tourism and to maximize tourism’s socio-economic contribution while minimizing its possible negative impacts, and is committed to promoting tourism as an instrument in achieving the **Sustainable Development Goals** (SDGs)
5. Works to make tourism an effective tool for development through technical assistance projects in over 100 countries.

Contribution of Tourism to India’s Economy:

- 10.6 million Foreign tourists received in 2018-19 compared to 10.4 million in 2017-18.
- Forex earnings from tourism stood at US\$ 27.7 billion in 2018-19 compared to US\$ 28.7 billion in 2017-18.

Source: Economic Survey

BOIGA THACKERAYI

1. It is a new species of snake that has been discovered in the Western Ghats in Maharashtra.
2. In the category cat snakes which belongs to the genus Boiga and has Tiger like stripes on its body
3. The second species of Boiga after *B. dightoni* that is endemic to the Western Ghats and the first new species of Boiga described after 125 years from the Western Ghats.

Western Ghats

- The Western Ghats is a chain of mountains running parallel to India’s western coast, approximately 30-50 km inland, the Ghats traverse the States of Kerala, Tamil Nadu, Karnataka, Goa, Maharashtra and Gujarat.
- These mountains cover an area of around 140,000 km² in a 1,600 km long stretch that is interrupted only by the 30 km Palghat Gap at around 11°N.
- These are internationally recognized as a region of immense global importance for the conservation of biological diversity, besides containing areas of high geological, cultural and aesthetic values.

INDIA TB REPORT 2019

The Union Ministry of Health & Family Welfare released the India **TB Report 2019**.

1. 16% increase in 2018 compared to 2017
2. India accounted for a quarter of the Global TB burden with 27 lakh new cases in 2018
3. 89% individuals in age group 15-69
4. Uttar Pradesh accounted for 20% of all notifications (187 cases/lakh population)
5. Odisha witnessed a decline in the number of notified cases from over 67,000 in 2017 to 50,244 in 2018

6. The two UTs of Delhi and Chandigarh had the highest number of notified patients per lakh population, at 417 and 468, respectively
7. TB is the leading cause of morbidity and mortality among people living with HIV, HIV co-infection rates among TB patients 3% i.e. 11,000 people with HIV die every year due to TB.

RIGHT LIVELIHOOD AWARD

The annual **Right Livelihood Award** created in 1980 by Swedish-German philanthropist Jakob von Uexkull. Winners of a Right Livelihood Award 2019-

1. Swedish climate activist Greta Thunberg
2. Brazilian indigenous leader Davi Kopenawa of the Yanomami people
3. Chinese women's rights lawyer Guo Jianmei
4. Western Sahara human rights defender Aminatou Haidar

PROMPT CORRECTIVE ACTION (PCA)

The Reserve Bank has initiated Prompt Corrective Action (PCA) against Lakshmi Vilas Bank (LVB) due to

- a high level of bad loans
- lack of sufficient capital to manage risks
- negative return on assets for two consecutive years

The regulatory action may cast doubts over the proposed merger of Indiabulls Housing Finance with LVB, which is awaiting RBI nod.

Trigger points for prompt corrective action in terms of three parameters:

- Capital to risk weighted assets ratio (CRAR)
 - Net nonperforming assets (NPA)
 - Return on Assets (RoA)
1. Banks are restricted from certain riskier activities such as expanding the number of branches, increasing the size of their loan book and paying dividend.
 2. Applicable only to commercial banks. It is not applicable to – Co-operative banks, Non-Banking Financial Companies (NBFCs) and Financial Management Institutions (FMI)s.
 3. Present status is that 11 out of 21 Public sector Banks are under the RBI's PCA framework.
 4. These are Dena Bank, Central Bank of India, Bank of Maharashtra, UCO Bank, IDBI Bank, Oriental Bank of Commerce, Indian Overseas Bank, Corporation Bank, Bank of India, Allahabad Bank and United Bank of India.

THE 'RIGHT TO BE FORGOTTEN' ON THE INTERNET

Recently, the European Union's highest court ruled that an online privacy rule known as the 'right to be forgotten' under European law would not apply beyond the borders of EU member states.

1. ECJ ruled in favour of the search engine giant Google, which was contesting a French regulatory authority's order to have web addresses removed from its global database.
2. Ruling comes as an important victory for Google, and lays down that the online privacy law cannot be used to regulate the internet in countries such as India, which are outside the European Union.

3. Right empowers individuals to ask organisations to delete their personal data

BATHUKAMMA

Telangana government recently celebrated the eagerly awaited 'Festival of Flowers' (Bathukamma) for which the State is known. It is traditionally celebrated by women across the state.

GALO COMMUNITY

At about 1.5 lakh people, the Galos are one of the 26 major communities of Arunachal Pradesh. Belong to the Tani group inhabiting Assam and Arunachal Pradesh, besides Tibet.

1. Mopin is the main festival which is celebrated for the prosperity of the villages.
2. Galos perform Popir dance.

PORTAMENTO

An MIT student has invented a novel algorithm that produces a portamento effect between any two audio signals in real-time.

"Portamento" is a term that's been used for years, referring to the effect of gliding a note at one pitch into a note of a lower or higher pitch. But only instruments that can continuously vary in pitch — such as the human voice, string instruments, and trombones — can pull off the effect.

SCHOOL EDUCATION QUALITY INDEX (SEQI)

NITI Aayog releases the first edition of **School Education Quality Index (SEQI)**.

1. Developed by NITI Aayog to evaluate the performance of States and Union Territories (UTs) in the school education sector
2. To bring an 'outcomes' focus to education policy by providing States and UTs with a platform to identify their strengths and weaknesses and undertake requisite course corrections or policy interventions
3. Developed through a collaborative process, including key stakeholders such as MHRD, the World Bank and sector experts
4. Consists of 30 critical indicators that assess the delivery of quality education
5. Kerala has emerged on top among 20 large states, followed by Rajasthan and Karnataka, while the most-populous Uttar Pradesh was ranked at the bottom position
6. Overall performance has declined in Karnataka and Uttarakhand, Mizoram, Sikkim and Arunachal Pradesh.

SOVEREIGN GOLD BOND SCHEME

Government of India, in consultation with the Reserve Bank of India, has decided to issue Sovereign Gold Bonds. The Bonds will be sold through Scheduled Commercial banks (except Small Finance Banks and Payment Banks), Stock Holding Corporation of India Limited (SHCIL), designated post offices, and recognised stock exchanges viz., National Stock Exchange of India Limited and Bombay Stock Exchange Limited.

1. Sovereign Gold Bond Scheme was introduced by the Government in 2015 to help reduce India's over dependence on gold imports
2. Aimed at changing the habits of Indians from saving in physical form of gold to a paper form with Sovereign backing
3. Will be denominated in multiples of gram(s) of gold with a basic unit of 1 gram
4. Tenor will be for a period of 8 years with exit option from the 5th year to be exercised on the interest payment dates
5. Tenor will be for a period of 8 years with exit option after 5th year to be exercised on the interest payment dates
6. Investors will be compensated at a fixed rate of 2.50 percent per annum payable semi-annually on the nominal value.

COMMUTATION

The Ministry of Home Affairs has decided to commute the death sentence of Balwant Singh Rajoana, who was convicted for the assassination of former Punjab chief minister Beant Singh, to life imprisonment. Beant Singh, credited for ending terrorism in Punjab, was assassinated on August 31, 1995, in an explosion in Chandigarh.

1. **Commutation:** means reducing the punishment by changing the nature of punishment, for example, death may be changed to life imprisonment
2. **Pardon:** to abolish punishment and to absolve the convict of all charges, If Pardon is granted, it is assured as if the convict has not committed any crime
3. **Remission:** reducing the punishment without changing the nature of punishment, For example imprisonment for 20 years may be reduced to 10 years.

RUCO (REPURPOSE USED COOKING OIL) INITIATIVE

To mark the 150th birth anniversary of Mahatma Gandhi on 2nd October as Rashtriya Swachhta Diwas, publicity vans were flagged off in Delhi, to generate awareness among the people about the OMCs' initiative of converting Used Cooking Oil to Biodiesel.

1. During frying, several properties of oil are altered, Total Polar Compounds(TPC) are formed on repeated frying
2. Toxicity of these compounds is associated with several diseases such as hypertension, atherosclerosis, Alzheimer's disease, liver diseases
3. FSSAI has fixed a limit at 25 percent beyond which the vegetable oil shall not be used
4. Level of TPC increases every time oil is re-heated
5. **RUCO:** Launched by FSSAI, will enable collection and conversion of used cooking oil to bio-diesel
6. FSSAI wants businesses using more than 100 litres of oil for frying, to maintain a stock register and ensure that UCO is handed over to only registered collecting agencies
7. While biodiesel produced from used cooking oil is currently very small, but a robust ecosystem for conversion and collection is rapidly growing in India and will soon reach a sizable scale

SC & ST (PREVENTION OF ATROCITIES) ACT, 1989

The Supreme Court recalled its directions in a March, 2018 verdict that had effectively diluted provisions of arrest under the Scheduled Castes & Scheduled Tribes (Prevention of Atrocities) Act, 1989.

1. This was following a plea by the Centre seeking a review of that judgment.
2. 'Overruling' means that the law laid down in one case is overruled in another case
3. When a higher court on appeal alters the judgment of a lower court, it is called 'reversal'.

VAYOSHRESHTHA SAMMAN

- The President of India Shri Ram Nath Kovind will confer the “**Vayoshreshtha Samman-2019**” on the eminent senior citizens and institutions to mark ‘International Day of older Persons.’
- Instituted by the **Ministry of Social Justice and Empowerment** in the year 2005 and were elevated to the level of national awards in 2013.
- Conferred on the 1st October on the occasion of International Day of Older Persons (IDOP).

KARGIL TO KOHIMA (K2K) ULTRA MARATHON

To commemorate 20th year of Kargil Victory and to live up to the true tradition and motto of IAF i.e. “Touch the Sky with Glory”, a unique expedition Kargil to Kohima (K2K) Ultra-Marathon- “Glory Run” is being undertaken by IAF from Kargil War Memorial, Drass (J&K) to Kohima War Cemetery, Kohima (Nagaland).

ALL P.U.C. CENTRES TO LINK EMISSION TEST DATA WITH ‘VAHAN’ DATABASE

Ministry of Road Transport & Highways has reiterated the necessity of linking all vehicle data with VAHAN database to avoid harassment and inconvenience to citizens.

1. This information should be available to citizens in electronic form also in m-Parivahan and e-Challan platforms for their convenience.
2. In a letter to the Chief Secretaries of all the States and Union Territories, the Ministry has stressed upon adopting this step urgently especially since the operationalization of certain provisions of the Motor Vehicles (Amendment) Act, 2019 and the revised provisions for penalties for driving vehicle violating air pollution standards etc.
3. As per the directions of the Hon’ble Supreme Court, the Ministry had earlier issued a notification for amendment in the rule 115 Of central Motor Vehicle Rules, 1989 vide GSR 527 (E) dated 06.06.2018, for linkage of PUC certificate with VAHAN database.
4. The States and Union Territories have been asked to ensure that all PUC centres upload emission test data electronically to VAHAN database as per guidelines issued in compliance with Supreme Court directions.

PM RECEIVES ‘GLOBAL GOAL KEEPER AWARD’

- The Prime Minister of India, Shri Narendra Modi received the ‘Global Goalkeeper’ Award by Bill and Melinda Gates Foundation for Swachh Bharat Abhiyan, on 24 September 2019.
- The award ceremony took place on the sidelines of the United Nations General Assembly (UNGA) session in New York.

SARDAR PATEL NATIONAL UNITY AWARD

The Union Government has instituted the highest civilian award in the field of contribution to the unity and integrity of India, in the name of Sardar Vallabhbhai Patel.

1. A notification instituting the **Sardar Patel National Unity Award** was issued by Ministry of Home Affairs on 20th September, 2019.
2. The Award seeks to recognize notable and inspiring contributions to promote the cause of national unity and integrity and to reinforce the value of a strong and united India.
3. The award will be announced on the occasion of the National Unity Day, i.e. the birth anniversary of Sardar Patel on 31st October.
4. An Award Committee would be constituted by the Prime Minister, which would include the Cabinet Secretary, Principal Secretary to the Prime Minister, Secretary to the President, Home Secretary as Members and three-four eminent persons selected by the Prime Minister.

NATIONAL LAUNCH OF 10 YEAR RURAL SANITATION STRATEGY (2019-2029)

The **Department of Drinking Water and Sanitation** (DDWS), Ministry of Jal Shakti, GoI launched the 10 Year Rural Sanitation Strategy (2019-2029), which focus on sustaining the sanitation behaviour change that has been achieved under the Swachh Bharat Mission Grameen (SBM-G), ensuring that no one is left behind, and increasing access to solid and liquid waste management.

1. Since the launch of the SBM-G in 2014, over 10 crore toilets have been built in rural areas; over 5.9 lakh villages, 699 districts, and 35 States/UTs have declared themselves Open Defecation Free (ODF).
2. This strategy has been prepared by DDWS, in consultation with State Governments and other stakeholders, and it lays down a framework to guide local governments, policy makers, implementers and other relevant stakeholders in their planning for ODF Plus, where everyone uses a toilet, and every village has access to solid and liquid waste management.

C 40 SUMMIT

1. **C40** is a network of the world's megacities committed to addressing climate change.
2. C40 supports cities to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable action on climate change.
3. The C40 Cities Climate Leadership Group (C40) is a group of 94 cities around the world that represents one twelfth of the world's population and one quarter of the global economy.
4. Created and led by cities, C40 is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens.
5. Bengaluru, Chennai, Jaipur, Kolkata, Mumbai and New Delhi are part of this network.

TIGER RESERVES IN MADHYA PRADESH

1. Madhya Pradesh might soon see its seventh tiger reserve - the **Ratapani Tiger Reserve**.
2. The proposed reserve will be carved out of the Ratapani wildlife sanctuary which is spread over Raisen and Sehore districts.

3. India launched Project Tiger in 1973 with an aim to limit factors that leads to reduction of tiger habitats and to mitigate them by suitable management.
4. Jim Corbett in Uttarakhand is the first Tiger Reserve to be established under Project Tiger.
5. At present, there are 50 tiger reserves in India.
6. Orang Tiger Reserve in Assam is the 49Th tiger reserve and Kamlang Tiger Reserve in Arunachal Pradesh is the **50th**.
7. National Tiger Conservation Authority, established in 2005, oversees management of Project Tiger and Tiger Reserves in India.
8. There are 6 Tiger Reserves in Madhya Pradesh: Kanha Tiger Reserve, Pench Tiger Reserve, Bandhavgarh Tiger Reserve, Sanjay Dubri Tiger Reserve, Bori- Satpura Tiger Reserve, Panna Tiger Reserve
9. According to All India Tiger Estimation Report– 2018, Madhya Pradesh has highest number of tigers (526), followed by Karnataka (524) and Uttarakhand (442).
10. Madhya Pradesh is thus called Tiger State of India.

INFORMATION FUSION CENTRE (IFC) FOR THE INDIAN OCEAN REGION (IOR)

1. The Information Fusion Centre – Indian Ocean Region (IFC- IOR) which was set up in 2018 has started functioning as an information sharing hub of maritime data.
2. The IFC-IOR has been established at the Indian Navy's Information Management and Analysis Centre (IMAC) in Gurugram, Haryana.
3. It is the single point center linking all the coastal radar chains to generate a seamless real-time picture of the nearly 7,500-km coastline.
4. It has been established with the vision of strengthening maritime security in the region and beyond by building a common coherent maritime situation picture and acting as a maritime information hub for the region.
5. The IFC will share White Shipping Information with the countries.
6. White shipping refers to commercial shipping information about the movement of cargo ships.
7. All Countries that have signed the white shipping information agreement with India are IFC partners.
8. It will also help to counter the rise in maritime piracy in the Indian Ocean region.

MOSAIC MISSION

- Vishnu Nandan of Kerala, who is a polar researcher will be the only Indian among 300 scientists from across the world aboard the Multidisciplinary Drifting observatory for the Study of Arctic Climate (**MOSAiC**) expedition, which will help the researchers better understand the impact of climate change and aid in improved weather projections.
- **MOSAiC** is an international research expedition to study the physical, chemical, and biological processes that coupled the Arctic atmosphere, sea ice, ocean, and ecosystem.

RBI'S TOOLS TO GAUGE A BANK'S HEALTH

1. **Capital position:** especially capital-to-risk weighted assets ratio (CRAR) that measures the bank's exposure to riskier loans. The RBI has mandated that banks must maintain CRAR > 9%.
2. **Profitability:** It is gauged by measuring a bank's Return on Assets (net income by total assets). An RoA of >= 1% is considered good.

3. **Rating system:** The RBI measures the financial robustness of banks using a rating system which takes in to account indicators such as CRAR; net NPAs to total advances; RoAs; liquid assets to total assets; and cost of income.

GEMINI

To avoid communication blackouts that led to 20 fishermen going missing in the aftermath of Cyclone Okchi in 2017, a slew of government departments, research agencies and private companies have developed GEMINI, a portable receiver linked to ISRO-satellites, that is “fail-proof” and warn fishermen of danger.

1. The Indian National Centre for Ocean Information Services (INCOIS), a Hyderabad institute collaborated with Accord, a private company, to develop a boxshaped receiver that has an antenna and in-built battery that can last three to four days, according to a brochure describing the device.
2. GEMINI works on GAGAN, developed by ISRO and the Airports Authority of India and is an India-made global positioning system and relies on the positioning system by ISRO's GSAT satellites.
3. When GEMINI is connected to an app, it also lets fishermen know the probability of fish-catch in the surrounding seas.
4. With this device, fishermen outside the signal range of their phone companies can also access warnings and alerts.
5. Mobile phone frequencies cannot be accessed 10-12 km beyond the coast and with GEMINI this range can increase to 300 nautical miles, according to a press release.
6. The device only allows one-way communication — it can't be used by fishermen to make calls, for instance.

GLOBAL COMPETITIVENESS INDEX 2019

India has moved down 10 places to rank 68th on an annual global competitiveness index, largely due to improvements witnessed by several other economies, while Singapore has replaced the U.S. as the world's most competitive economy.

1. The annual Global Competitiveness Index compiled by Geneva-based World Economic Forum (WEF)
2. The WEF said that India ranked below 100 on five pillars, and featured in the top 50 of just four pillars.
3. India ranks high in terms of macroeconomic stability and market size, Ranked second for shareholder governance.
4. India is ranked also high at 15th place in terms of corporate governance, while it is ranked second globally for shareholder governance.
5. In terms of the market size, India is ranked third, while it has got the same rank for renewable energy regulation.
6. Besides, India also punches above its development status when it comes to innovation, which is well ahead of most emerging economies and on par with several advanced economies.
7. But, these positive metrics contrast with major shortcomings in ICT (information, communications and technology) adoption, poor health conditions and low healthy life expectancy (is one of the shortest outside Africa and significantly below the South Asian average).

8. Besides, India needs to grow its skills base, while its product market efficiency is undermined by a lack of trade openness and the labour market is characterised by a lack of worker rights' protections, insufficiently developed active labour market policies and critically low participation of women.
9. With a ratio of female workers to male workers of 0.26, India has been ranked very low and also for meritocracy and incentivization, and skills.
10. In the overall ranking, India is followed by some of its neighbours including Sri Lanka at 84th place, Bangladesh at 105th, Nepal at 108th and Pakistan at 110th place.
11. A number of similarly-placed economies including Colombia, South Africa and Turkey improved over the past year and hence have overtaken India.
12. Singapore has become the world's most competitive economy in 2019, pushing the U.S. to the second place.
13. China is ranked 28th (the highest ranked among the BRICS).

COMPREHENSIVE NATIONAL NUTRITION SURVEY (CNNS)

The Comprehensive National Nutrition Survey by the Ministry of Health and Family Welfare has found that 35 percent of children under the age of 5 years in the country are stunted, while 17 per cent are wasted and 33 per cent are underweight.

1. The survey, conducted between 2016 and 2018, also found that 24 per cent of adolescents were thin for their age, 4-8 per cent of adolescents were overweight or obese and 2 per cent had abdominal obesity.
2. The study also found that 10.4 percent of 10-19 year-olds in India are pre-diabetic, which experts say is largely due to consumption of processed foods and sedentary lifestyles.
3. A number of the most populous states including Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh, and had a high 37-42 per cent stunting prevalence.
4. The lowest prevalence of stunting (16-21 per cent) was found in Goa and Jammu and Kashmir.
5. A higher prevalence of stunting in under-fives was found in rural areas (37 per cent) compared to urban areas (27 per cent).
6. Also, children in the poorest wealth quintile were more likely to be stunted (49 per cent), as compared to 19 per cent in the richest quintile.
7. According to the survey, 17 per cent of Indian children age 0-4 years were wasted.
8. High prevalence (20 per cent) states including Madhya Pradesh, West Bengal, Tamil Nadu and Jharkhand.
9. The states with the lowest prevalence of under-five wasting were Manipur, Mizoram and Uttarakhand (6 per cent each).
10. The study also found that 41 percent of pre-schoolers, 24 percent of school-age children and 28 percent of adolescents were anaemic.
11. Anaemia was a moderate or severe public health problem among pre-schoolers in 27 states, among school-age children in 15 states, and among adolescents in 20 states.

Comprehensive National Nutrition Survey (CNNS), the first-ever nationally representative nutrition survey of children and adolescents in India, was commissioned by the ministry and carried out by experts from various institutes, including PGIMER Chandigarh, Kalawati Saran Children's Hospital in New Delhi, along with experts from UNICEF and other development partners.

TECHNICAL ASSISTANCE PROGRAMME (TAP)

India will be announcing the launch of the second phase of the **Cotton Technical Assistance Programme (TAP) for Africa** at the Partners Conference in Geneva.

1. In the five year long second phase, the programme will be scaled up in size and coverage and will be introduced in five additional countries, namely Mali, Ghana, Togo, Zambia and Tanzania.
2. The Cotton TAP programme will now cover 11 African countries including the C4 (Benin, Burkina Faso, Chad and Mali).
3. India implemented a Technical Assistance Programme (TAP) for cotton in 6 African countries, namely – Benin, Burkina Faso, Chad, Malawi, Nigeria and Uganda from 2012 to 2018.
4. The Technical Assistance Programme (TAP) covers the following broad areas:- Increasing cotton production (area expansion and productivity enhancement), Improving Extension & Support Service Efficiency, Enhancing R&D/ Quality Control , Marketing/Distribution Infrastructure, Strengthening/development of cotton residue based value addition industry, Creating/Strengthening Downstream Industry in Textiles and Clothing

BRU TRIBE REPATRIATION ISSUE

Mizoram's **Bru** refugees housed in makeshift camps in north Tripura stalled another repatriation initiative.

1. A conflict with the majority Mizos in 1995 made influential organisations like the Mizo Zirlai Pawl (students' union) demand that the Brus, labelled a non-indigenous tribe, be deleted from Mizoram's electoral rolls.
2. As a consequence to this, an armed movement began by the extremist Bru National Liberation Front.
3. Nearly 40,000 Brus fled to North Tripura where they were given shelter in relief camps.
4. Most of the refugees were from Mamit and a few from Kolasib and Lunglei.
5. Resistance by Mizo NGOs to their return made the refugees relevant only during elections, with Mizoram official's crossing over to Tripura for facilitating their franchise.
6. Centre signed an agreement with the Mizoram Bru Displaced People's Forum and the governments of Mizoram and Tripura for repatriation of Bru families to Mizoram.
7. The package covers 32,876 members of 5,407 Bru families, entailing a one-time assistance of Rs.4 lakh in fixed deposit within a month of repatriation, monthly assistance of Rs.5,000 through direct benefit transfer, free rations for two years, and Rs.1.5 lakh in three instalments for building houses.

GANGA AAMANTRAN ABHIYAN

Ganga Aamantran Abhiyan is a pioneering and historic exploratory open-water rafting and kayaking expedition on the Ganga River to be held between 10th October to 11th November 2019.

1. Starting at Devprayag and culminating at Ganga Sagar, the expedition will cover the entire stretch of over 2500 kms of the Ganga River.
2. This is the first ever effort by National Mission for Clean Ganga to raft across the entire stretch of the river and also the longest ever social campaign undertaken through an adventure sporting activity to spread the message of River Rejuvenation and Water Conservation on a massive scale.

GRADED RESPONSE ACTION PLAN (GRAP)

1. Starting October 15, some stricter measures to fight air pollution will come into force in Delhi's neighbourhood, as part of the Graded Response Action Plan (GRAP).
2. In pursuant with Supreme Court's order in the M. C. Mehta vs. Union of India (2016) regarding air quality in National Capital Region of Delhi, the Graded Response Action Plan was notified by MoEFCC in 2017.
3. Graded Response Action Plan (GRAP) is a set of stratified actions that are taken once the pollution level reaches a certain specified limit.
4. It works only as an emergency measure.
5. Under GRAP, there are 4 stages of pollution – Moderate to Poor, Very Poor, Severe and Severe+ or Emergency and action are listed that need to be undertaken as the levels are breached.
6. The categories have been made on the basis of PM 2.5 and PM 10 in the atmosphere.
7. The GRAP is implemented by the Environment Pollution Control Authority (EPCA).
8. EPCA is a Supreme Court mandated body tasked with taking various measures to tackle air pollution in Delhi NCR.
9. It was constituted in 1998 under the provisions of the Environment (Protection) Act, 1986

GREEN CHANNEL

The Competition Commission of India (CCI) has given its approval under the 'green channel' route to acquisition of Essel Mutual Fund by BAC Acquisitions Pvt Ltd, a Sachin Bansal-owned entity.

The Green Channel allows for automatic approval for certain Mergers and Acquisitions (M&As) or combinations based on specified criteria and pre-filing consultation. Under the framework, green channel approvals can be availed in combinations where there are:

1. no horizontal overlaps
2. no existing or potential vertical relationships
3. no complementary business activities between the combining parties in which any of the combining parties hold shares or have control.

Competition Commission of India is a statutory body of the Government of India established in 2003.

1. It is responsible for enforcing the Competition Act, 2002 throughout India and to prevent activities that have an appreciable adverse effect on competition in India. CCI consists of a Chairperson and 6 Members appointed by the Central Government.
2. The act prohibits
 - (a) anti-competitive agreements
 - (b) abuse of dominant position by enterprises
 - (c) regulates combinations (acquisition, acquiring of control and mergers and acquisitions) which causes or likely to cause an appreciable adverse effect on competition within India

NOBEL PRIZE 2019

The Nobel Prize in Physiology or Medicine:

- William G. Kaelin, Jr.
- Sir Peter J. Ratcliffe
- Gregg L. Semenza

Awarded for their discoveries of how cells sense and adapt to oxygen availability.

The Nobel Prize in Physics:

- James Peebles
- Ichel Mayor
- Didier Queloz

For contributions to our understanding of the evolution of the universe and Earth's place in the cosmos" with one half to James Peebles "for theoretical discoveries in physical cosmology", the other half jointly to Michel Mayor and Didier Queloz "for the discovery of an exoplanet orbiting a solar-type star."

The Nobel Prize in Chemistry

- John B. Goodenough
- M. Stanley Whittingham
- Akira Yoshino

Awarded for the development of lithium-ion batteries.

The Nobel Prize in Literature:

- a. **Year 2019:** Peter Handke awarded Nobel literature Prize this Year . He was awarded for "for an influential work that with linguistic ingenuity has explored the periphery and the specificity of human experience."
- b. **Year 2018:** Olga Tokarczuk awarded Nobel literature Prize for Year 2018 . She was awarded for "for a narrative imagination that with encyclopaedic passion represents the crossing of boundaries as a form of life."

The Nobel Peace Prize:

Nobel Peace Prize for 2019 to Ethiopian Prime Minister Abiy Ahmed Ali for his efforts to achieve peace and international cooperation, and in particular for his decisive initiative to resolve the border conflict with neighbouring Eritrea.

Nobel Economics Prize, SverigesRiksbank Prize in Economic Sciences:

- Abhijit Banerjee
- Esther Duflo
- Michael Kremer

Awarded for their experimental approach to alleviating global poverty.

MAHABALIPURAM

In news because of informal summit between India and China at Mamallapuram. The coastal town of Mamallapuram is evocative of ancient maritime links between the Pallava empire and China 2,000 years ago.

1. Bodhidharma, the founder of the Dhyana school of meditation at the Shaolin monastery in Henan province in China, hailed from this region.
2. Mahabalipuram or Mamallapuram is a historic city and UNESCO World Heritage site in Tamil Nadu.
3. During the reign of the Pallava dynasty, between the 3rd century CE and 7th century CE, it became an important centre of art, architecture and literature.
4. Mahabalipuram was already a thriving sea port on the Bay of Bengal before this time. A significant amount of coins and other artefacts excavated from this region also indicate a pre-existing trade relation with the Romans even before it became a part of the Pallava Empire.
5. Ancient mariners considered this place the land of the Seven Pagodas.
6. During the rule of Mahendravarman I (600 CE – 630 CE), Mahabalipuram started to flourish as a centre of art and culture.
7. His patronage of artistic excellence was duly continued by his son Narasimhavarman I (630 CE – 680 CE) and subsequent Pallava kings. Group of Monuments at Mahabalipuram
8. This group of sanctuaries, founded by the Pallava kings, was carved out of rock along the Coromandel coast in the 7th and 8th centuries.
9. It is known especially for its rathas (temples in the form of chariots), mandapas (cave sanctuaries), giant open-air reliefs such as the famous 'Descent of the Ganges', and the temple of Rivage, with thousands of sculptures to the glory of Shiva. Descent of the Ganges
10. Alternatively known as Arjuna's Penance, Descent of the Ganges is a gigantic open air bas-relief sculpted out of pink granite.
11. The dramatic relief sculpture narrates the tales from Indian epics such as the Mahabharata. PanchaRatha
12. PanchaRatha (five chariots) is an architectural ode to Mahabharata's five Pandava brothers Yudhishthira, Bhima, Arjuna, Nakula, Sahadeva, and their wife Draupadi.
13. Thematically and structurally, each ratha is significantly different from the other ones, but all of them were carved out of a long stone or monolith. Shore Temple
14. The Shore Temple is located on the beach and if local lore is to be trusted it is the one surviving structure of the legendary Seven Pagodas. Built between 700 and 728 CE during the reign of Narasimhavarman II, this is indeed a remnant of a larger complex of temples and civil structures much of which lie under the depth of the sea now. This five-story edifice is so situated that the first rays of the rising sun fall on the presiding deity of the temple, Shiva.
15. Also known as the Olakkannatha Temple, the Olakkanneshvara Temple (Temple of Shiva, suggestive of the third eye of Shiva) was built about the same time as the Shore Temple.

ANNUAL GANGES RIVER DOLPHIN CENSUS

The annual Ganges river dolphin census, undertaken by World Wide Fund for Nature-India in collaboration with the Uttar Pradesh Forest Department along about 250-km-long riverine stretch of Upper Ganga *between Hastinapur Wildlife Sanctuary and Narora Ramsar* site began.

1. Unlike previous years, when direct counting method was used, this year the tandem boat survey method is being used.
2. The method, developed by the renowned river and marine ecologist Gill Braulik, provides a more accurate count of the endangered species.
3. Here the officials use two inflated boats which move in tandem to count the dolphins.
4. After collating the data, statistical tools are employed to arrive at the final count.
5. In this process, the number of sightings are not announced on a daily basis.
6. Gangetic river dolphins are found in the rivers systems of Ganga, Brahmaputra, Meghna and Karnaphuli- Sangu in Nepal, India and Bangladesh.
7. It is the only surviving freshwater dolphin in India.
8. The Ganges River dolphin is classified as endangered by the IUCN Red List and has been included in the Schedule I for the Wildlife (Protection) Act, 1972.
9. Being a mammal, the Ganges River dolphin cannot breathe in the water and must surface every 30-120 seconds.
10. Because of the sound it produces when breathing, the animal is popularly referred to as the 'Susu'.
11. Their eyes lack a lens and therefore function solely as a means of detecting the direction of light.
12. It uses echolocation to navigate and hunt. Like bats, they produce high-frequency sounds which helps them 'see' objects when the sound waves bounce off them.
13. River Dolphins are solitary creatures and females tend to be larger than males.
14. The Ganges River dolphin (Susu) is among the four "obligate" freshwater dolphins - the other three are: the baiji now likely extinct from the Yangtze river in China, the bhulan of the Indus in Pakistan and the boto of the Amazon River in Latin America.
15. The Vikramshila Gangetic Dolphin Sanctuary (VGDS), from Sultanganj to Kahalganj on the Ganga in Bihar is the only dolphin sanctuary in the country. National Waterway-1 connecting Haldia to Varanasi passes through it.
16. River Dolphin is the National Aquatic Animal of India.

WORLD WIDE FUND FOR NATURE (WWF)

It is an international organization committed to conservation of the environment.

1. Mission: to conserve the world's biological diversity, to ensure that the use of renewable natural resources is sustainable, and to promote the reduction of pollution and of wasteful consumption.
2. The WWF provides money for conservation initiatives around the world.
3. These include programs focused on individual species, forests, and freshwater and marine issues as well as climate change and responsible international trade.
4. The group has also been involved in efforts to provide a safe and sustainable habitat for the world's peoples, both urban and rural, including clean water, clean air, healthful food, and rewarding recreation areas.
5. Among the WWF's notable achievements is its use of debt-for-nature swaps, in which an organization buys some of a country's foreign debt at a discount, converts the money to local currency, and then uses it to finance conservation efforts.
6. The WWF's first successful debt-for-nature swap took place in 1987 in Ecuador.
7. The organization's logo is a distinctive panda.

INVASIVE WEEDS THREATENING TIGER HABITATS IN ADILABAD

1. India accounts for 8% of the global biodiversity existing in only 2.4% land area of the world.
2. An invasive species is an organism that causes ecological or economic harm in a new environment where it is not native
3. Invasive species possess characteristic features like: pioneer species in varied landscapes, tolerant of a wide range of soil and weather conditions, generalist in distribution, produces copious amounts of seed that disperse easily, grows aggressive root systems, short generation time, high dispersal rates, long flowering and fruiting periods, broad native range and abundant in native range.
4. Invasive species are likely to have relatively small amounts of DNA in their cell nuclei.
5. Apparently, the cells in these plants are able to divide and multiply more quickly and consequently the entire plant can grow more rapidly than species with higher cellular DNA content. This gives them a leg up in disturbed sites.
6. *Cotton grass and Lantana* are known to harm agriculture and biodiversity.
7. *Papaya Mealy Bug*, which belongs to Mexico and Central America, have destroyed huge crops of papaya in Assam, West Bengal and Tamil Nadu.
8. *Cotton Mealybug* is a native of North America but has severely affected cotton crops in the Deccan.
9. Among the invasive fish species, Amazon sailfin catfish has been destroying fish populations in the wetlands of Kolkata.
10. African apple snail is said to be most invasive among all alien fauna. It is a mollusc and was first reported in the Andaman and Nicobar Islands. But today it is found all across the country and is threatening the habitats of several native species.

NATIONAL HEALTH POLICY 2017

1. Increase Life Expectancy at birth from 67.5 to 70 by 2025.
2. Establish regular tracking of Disability Adjusted Life Years (DALY) Index as a measure of burden of disease and its trends by major categories by 2022.
3. Reduction of TFR to 2.1 at national and sub-national level by 2025.
4. Reduce Under Five Mortality to 23 by 2025 and MMR from current levels to 100 by 2020.
5. Reduce infant mortality rate to 28 by 2019.
6. Reduce neo-natal mortality to 16 and still birth rate to “single digit” by 2025. Reduction of disease prevalence/incidence
7. Achieve global target of 2020 which is also termed as target of 90:90:90, for HIV/AIDS i.e. 90% of all people living with HIV know their HIV status, 90% of all people diagnosed with HIV infection receive sustained antiretroviral therapy, and 90% of all people receiving antiretroviral therapy will have viral suppression.
8. Achieve and maintain elimination status of Leprosy by 2018, Kala-Azar by 2017 and Lymphatic Filariasis in endemic pockets by 2017.
9. To achieve and maintain a cure rate of >85% in new sputum positive patients for TB and reduce incidence of new cases, to reach elimination status by 2025.
10. To reduce the prevalence of blindness to 0.25/ 1000 by 2025 and disease burden by one third from current levels.
11. To reduce premature mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases by 25% by 2025.
12. Increase utilization of public health facilities by 50% from current levels by 2025.
13. Antenatal care coverage to be sustained above 90% and skilled attendance at birth above 90% by 2025.
14. More than 90% of the newborn are fully immunized by one year of age by 2025.
15. Meet need of family planning above 90% at national and sub national level by 2025.

16. 80% of known hypertensive and diabetic individuals at household level maintain "controlled disease status" by 2025. Cross Sectoral goals related to health
17. Relative reduction in prevalence of current tobacco use by 15% by 2020 and 30% by 2025.
18. Reduction of 40% in prevalence of stunting of underfive children by 2025.
19. Access to safe water and sanitation to all by 2020 (Swachh Bharat Mission).
20. Reduction of occupational injury by half from current levels of 334 per lakh agricultural workers by 2020. Health finance
21. Increase health expenditure by Government as a percentage of GDP from the existing 1.15 % to 2.5 % by 2025.
22. Increase State sector health spending to > 8% of their budget by 2020.
23. Decrease in proportion of households facing catastrophic health expenditure from the current levels by 25%, by 2025.
24. Establish federated integrated health information architecture, Health Information Exchanges and National Health Information Network by 2025.
25. The policy identifies coordinated action on seven priority areas for improving the environment for health: The Swachh Bharat Abhiyan, Balanced healthy diets and regular exercises. Addressing tobacco, alcohol and substance abuse, Yatri Suraksha – preventing deaths due to rail and road traffic accidents, Nirbhaya Nari – action against gender violence
26. Reduced stress and improved safety in the work place, Reducing indoor and outdoor air pollution

FREE AND OPEN INDO-PACIFIC (FOIP)

1. "Free and Open Indo Pacific" was coined as a new foreign policy strategy by Japan and India in 2017 and which subsequently found favour with the United States (US) as well as regional Asian powers.
2. As per Japanese policy documents, the "Free and Open Indo-Pacific Strategy" seeks to improve "connectivity" between the Pacific and the Indian Oceans.
3. In pursuit of this, Japan aims to strengthen strategic collaboration with India, the US and Australia.
4. The Trump administration's vision of a "free and open Indo-Pacific" has three components – economic, governance and security.
5. Not only does the US seek greater economic engagement with countries of the Indo-Pacific but also aims at promoting greater transparency in governance and freedom for civil society in the region.
6. "Free and Open Indo-Pacific" can, arguably, be considered a reaction to the militarisation of waters in the Indo-Pacific, the South China Sea (SCS) in particular, and the growing heft of the Chinese economy across Asia and Africa.

DRAFT ARMS (AMENDMENT) BILL

Union Home Ministry has released a Draft Arms (Amendment) Bill. It amends the Arms Act, 1959.

1. The bill proposes an amendment to convict makers and users of illegal arms.
2. It says that the makers of prohibited arms and those carrying such arms have to spend the remainder of their life in prison if convicted.
3. The bill also says that anyone possessing more than 2 licensed gun has to deposit the third one with the authorities.
4. The amendment also categorizes illegal import of guns and their sales as illicit trade.

5. A sports person can possess a third weapon of 0.22 calibre rifle only if the user is a dedicated sports person whose participation is recognized in national and international events in the last 2 years.

NATIONAL COORDINATION CENTER

1. The National Coordination Center (NCC) will act as a synergy point for anti – Maoist operations and intelligence gathering.
2. It will create a strategy for security agencies to counter support received by the Maoist leaders.
3. It will also control the sympathy gained or created by the Maoists in the social media.
4. It will utilize knowledge of retired police officers who served in anti – Maoist operations in Odisha, Andhra Pradesh and Chattisgarh.
5. The coordination center will also identify the sources of finance to the Maoists and work to neutralize the network.

SURAKSHIT MATRITVA AASHWASAN (SUMAN) SCHEME

Union Minister for Health along with several State Health Ministers launched Surakshit Matritva Aashwasan (SUMAN) initiative for Zero Preventable Maternal and Newborn Deaths.

1. The scheme aims to provide dignified and quality health care at no cost to every woman and newborn visiting a public health facility in order to bring down maternal and infant mortality rates in the country.
2. Under the scheme, pregnant women, mothers up to 6 avail free healthcare benefits such as four antenatal check-ups and six home-based newborn care visits. The scheme will enable zero expense access to the identification and management of complications during and after the pregnancy. The government will also provide free transport from home to health institutions. The pregnant women will also have a zero expense delivery and C-section facility in case of complications at public health facilities.
3. Maternal mortality refers to the number of maternal deaths which occur due to pregnancy or as a result of a complication of the same. Maternal mortality rate (MMR) is taken as the number of recorded maternal deaths, for every 1 lakh live births. According to the government, India's maternal mortality rate has declined from 254 per 1, 00, 000 live births in 2004-06 to 130 in 2014-16.
4. Infant mortality rate (IMR) is the number of deaths per 1,000 live births of children under one year of age. Between 2001 and 2016, the infant mortality rate has also come down from 66 per 1,000 live births to 34.

MIZORAM IS TOP STATE WITH HIV PREVALENCE RATE

1. Mizoram, one of the least populated States in India, reports nine positive cases of Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) a day.
2. 67.21% of the positive cases from 2006 to March 2019 have been transmitted sexually.
3. The next major cause, accounting for 28.12% cases, is infected needles shared by intravenous drug users.
4. The Christian-majority State bordering Bangladesh and Myanmar has battled drug trafficking and abuse for a long time.

'FOREIGN' PLASTIC INVADES GREAT NICOBAR ISLAND

1. The pristine beaches of the Great Nicobar Island, India's southernmost territory, are under threat from plastic, including that of 'non-Indian origin.'
2. Major portion of the litter was of Malaysian origin. It was followed by Indonesia and Thailand. The litter of Indian origin only amounted to 2.2%.
3. About 10 countries including India contributed to the plastic litter in the island. They were Malaysia, Indonesia, Thailand, Singapore, Philippines, Vietnam, India, Myanmar, China and Japan.
4. The overwhelming contribution from Indonesia and Thailand was likely due to its proximity to the island; the plastic is likely to have made its way to the island because of water currents via the Malacca Strait, which is a major shipping route.
5. The huge quantities of marine debris observed on this island might be due to improper handling of the solid waste from fishing/mariculture activity and ship traffic. The Great Nicobar Island is home to one of the most primitive tribes of India — the Shompens.
6. The island includes the Great Nicobar Biosphere Reserve (GNBR) comprising of the Galathea National Park and the Campbell Bay National Park.
7. The island harbours a wide spectrum of ecosystems from tropical wet evergreen forests, mountain ranges and coastal plains.
8. The island is also home to giant robber crabs, crabeating macaques, the rare megapode as well as leatherback turtles.

BASE EROSION AND PROFIT SHIFTING

The **BEPS** refers to corporate tax planning strategies used by multinational companies that artificially shift profits from higher tax locations to lower ones, eroding the tax base of the higher tax locations.

1. The 2016 Union Budget announced an 'equalisation levy' of 6 per cent on such transactions. Equalisation Levy is a direct tax, which is withheld at the time of payment by the service recipient.
2. The two conditions to be met to be liable to equalisation levy: The payment should be made to a non-resident service provider; The annual payment made to one service provider exceeds Rs. 1,00,000 in one financial year.
3. Currently, not all services are covered under the ambit of equalisation Levy. The following services covered: Online advertisement; Any provision for digital advertising space or facilities/service for the purpose of online advertisement.
4. India is the first country to impose such a levy, post the Organization for Economic Cooperation and Development's (OECD's) BEPS action plan.
5. A tax panel has recommended expanding the ambit of this levy to cover a wide gamut of transactions including online marketing, cloud computing, website designing, hosting and maintenance, platforms for sale of goods and services, and online use of or download of software and applications.

MULTILATERAL CONVENTION TO IMPLEMENT TAX TREATY RELATED MEASURES

- India has ratified the Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting (MLI).
- MLI will enter into force for India on 01st October, 2019 and its provisions will have effect on India's 'double taxation avoidance agreements' (DTAAs) from FY 2020-21 onwards.
- The Multilateral Convention/MLI is an outcome of the Organization for Economic Cooperation and Development (OECD) action /G20 Project to tackle Base Erosion and Profit Shifting (the "BEPS Project").

6. Tax to GDP ratio in India is about 16%, including State taxes, whereas in many developed countries it is about 35%-40%.
7. It is imperative that India's tax-GDP ratio also climbs substantially so that our public social investments can rise to the levels that are required.
8. It is the expansion of tax base which would enhance the Tax-GDP ratio, rather than higher rates of taxes.

PROJECT BEEHIVE

1. For better planning and carrying out its operations ranging from countering terrorists in Jammu and Kashmir to moving deployments along the frontiers with Pakistan and China, the Indian Army is developing an automated program that will provide real time information to it about the life and present conditions of its tanks, vehicles, guns and air assets and their upcoming problems.
2. The program codenamed 'Project Beehive' will be a centralised and automated system based in Delhi under the army's Electronics and Mechanical Engineers (EME) corps.
3. It will be connected to each of the 2,000 workshops being run by the EME.

FULL COURT REFERENCE

- A full court reference is held for departed senior lawyers and judges of the apex court as a mark of respect and remembrance for their service to the court and the legal profession.
- A full court reference was held for former Union Ministers Sushma Swaraj and Arun Jaitley, who were both Supreme Court lawyers before they turned to politics.

NATIONAL CRIME RECORDS BUREAU

After a delay of two years the annual Crime in India Report 2017 was published by the National Crime Records Bureau (NCRB).

1. The Capital has recorded over 40% of total crime reported across 19 metropolitan cities in the country.
2. In Delhi, there is a facility to register First Information Reports online in cases of motor vehicle theft and other thefts, which may have increased the number of crime cases under these heads. This makes it statistically non-comparable with other cities where online registration is not available.
3. Delhi also remained ahead of all other metropolitans in crime against women.
4. According to the data, no cases of rioting over communal or religious issues and caste conflict were reported in Delhi in 2017.
5. Uttar Pradesh topped the list of cases involving crime against women followed by Maharashtra and West Bengal.
6. Majority of cases under crimes against women were registered under 'Cruelty by Husband or his Relatives' (27.9%) followed by 'Assault on Women with Intent to Outrage her Modesty' (21.7%), 'Kidnapping & Abduction of Women' (20.5%) and 'Rape' (7.0%).
7. Maximum number of incidents of rioting were reported from Bihar, followed by Uttar Pradesh and Maharashtra; the maximum riots occurred due to political reasons.
8. The incidents registered under the Scheduled Caste Prevention of Atrocities Act saw an increase from incidents reported in 2016 than in 2017.

9. Incidents of crime related to Scheduled Tribes dipped in 2017.
10. The NCRB for the first time collected data on circulation of “false/fake news and rumours.” Under the category, maximum incidents were reported from Madhya Pradesh (138), Uttar Pradesh (32) and Kerala (18).

Functions of National Crime Records Bureau

1. NCRB, now under the Home Ministry, was set-up in 1986 to function as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators.
2. NCRB developed Crime Criminal Information System (CCIS) in the year 1995, Common Integrated Police Application (CIPA) in 2004, and finally Crime and Criminal Tracking Network & System (CCTNS) in 2009.
3. National Digital Police Portal allows search for a criminal/suspect on a national data base apart from providing various services to citizens like filing of complaints online and seeking antecedent verification of tenants, domestic helps, drivers etc.
4. NCRB has also floated various IT based Public Services like, VahanSamanvay (online Motor Vehicle Matching), Talash (matching of missing persons and dead bodies).
5. In addition, NCRB also maintains Counterfeit Currency Information and Management System (FICN) and Firearms Coordination System for lost and recovered firearms. Cyber Crime Prevention against Women and Children (CCPWC) portal
6. Union Ministry of Home Affairs (MHA) has launched Cyber Crime Prevention against Women and Children (CCPWC) portal to check objectionable online content.
7. To collect and process crime statistics at the National level.
8. To function as the National storehouse of fingerprint (FP) records of convicted persons including FP records of foreign criminals.

ENVIRONMENT POLLUTION (PREVENTION AND CONTROL) AUTHORITY

1. Environment Pollution (Prevention and Control) Authority or the **EPCA** is the Supreme Court empowered body which is tasked with taking various measures to tackle air pollution in the National Capital Region.
2. The EPCA is also mandated to enforce Graded Response Action Plan (GRAP) in the city as per the pollution levels.
3. The EPCA also assists the apex court in various environment-related matters in the region.

ENVIRONMENTAL-FLOW/ECOLOGICAL FLOW REQUIREMENTS

The Centre has cut down by two years the grace period accorded to hydropower projects on the upper stretches of the Ganga, for complying with environmental-flow/ecological flow requirements.

1. Environmental flows refer to minimum water levels that must be maintained in the river at all times of the year for its health and sustainability as against hydropower projects that frequently dam water in rivers for generating power.
2. This was after it tasked the Central Water Commission (CWC) to ascertain actual flows and the amount of water present in the river through 2019.
3. The hydro-power plants will not maintain the minimum amount of flow could face closure under the Environment Protection Act.
4. Power project proponents will be assessed by the CWC quarterly for compliance after December 2019.

5. The e-flow notification specifies that the upper stretches of the Ganga - from its origins in the glaciers and until Haridwar- would have to maintain: 20% of the monthly average flow of the preceding 10-days between November and March, which is the dry season; 25% of the average during the 'lean season' of October, April and May; and 30% of monthly average during the monsoon months of June-September.

MIDDLE INCOME TRAP

- At the middle-income point, rapidly growing countries must undertake structural, economic and policy changes to effectively transition from a low-income, low-wage to a high-income, high-innovation state—thereby successfully avoiding the loss of economic momentum or stagnation.
- World Bank economists **Indermit Gill and Homi Kharas** (2016), the first proponents of the term middle-income trap, argue that such economies “must focus on the transition from productivity growth stemming from inter-sectoral resource reallocations to intra-sectoral catch-up technological growth (moving up the value chain).

To understand **Middle Income Trap**, classification of countries by the World Bank in terms of Per-Capita Income is to be understood.

1. Category-1, Low Income Countries (LICs)- \$1005 or less
2. Category- 2, Lower Middle-Income Countries (LMICs)- \$1006 – \$3955
3. Category- 3, Upper Middle-Income Countries (UMICs)- \$3956 – \$ 12235
4. Category-4, High Income Countries (HICs)- \$12236 and more
5. The “middle-income trap” is the phenomenon of hitherto rapidly growing economies stagnating at middle-income levels (of per capita income) and failing to graduate into the ranks of high-income countries.
6. According to the World Bank, of 101 middle-income economies in 1960, only 13 had become high income by 2008. Malaysia, Thailand, Egypt, Mexico and Peru all seem to have trouble moving up.
7. India has entered the middle-income position in 2008 and the per capita income is increasing slowly.
8. The best insurance against the risk of slipping into a middle-income trap, however, would be to address mobility restraints at lower levels of the socioeconomic pyramid.
9. This would mean sharply upping the quality of healthcare, education and skill development for the deprived masses.
10. These are long-gestation projects, as it were, and the results could take decades. But the economy needs to rise as a whole, not in parts.

PAKISTAN UNILATERALLY STOPPED POSTAL SERVICE TO India

Pakistan’s “unilateral” decision to stop postal mail service with India was in contravention of international norms, Union Minister Ravi Shankar Prasad.

Pakistan “without any prior notice or information has stopped sending postal department’s letter to India,” he said.

UNIVERSAL POSTAL UNION (UPU)

- Established in 1874, the Universal Postal Union (UPU), specialized agency of the United Nations, with its headquarters in the Swiss capital Berne.
- It is the second oldest international organization.
- With its 192 member countries, the UPU is the primary forum for cooperation between postal sector players.
- The original agreement adopted in 1875 applied only to letter mail; other postal services, such as parcel

KITTUR UTSAV

The **Kittur Utsav** (Karnatak) is a three-day festival which celebrates the Queen Rani Channamma's victory over East India's company in 1824. The festival organizes sports, cultural programmes and lectures by resource persons on the kingdom of Rani Channamma.

1. KitturChennamma (1778 – 1829) was an Indian freedom fighter and Rani of the Kittur, a former princely state in **Karnataka**.
2. She is one of the first women freedom fighters to have fought against the British rule in India.
3. She led an armed force against the British East India Company in 1824 in defiance of the doctrine of lapse in an attempt to maintain Indian control over the region.
4. She was defeated in the third war and was imprisoned at Bailhongal Fort where she died in 1829.

CAPE TOWN AGREEMENT

India is yet to ratify the Cape Town Agreement which was adopted by the International Maritime Organization (IMO) for safety of fishing vessels. The Cape Town Agreement was adopted by the IMO in 2012 to help combat illegal, unregulated and unreported (IUU) fishing.

1. The agreement is aimed at facilitating better control of fishing vessel safety by flag, port and coastal states.
2. It covers key parameters such as stability and associated seaworthiness, machinery, and electrical installations, life-saving appliances, communications equipment, fire protection and fishing vessel construction.
3. The Torremolinos declaration aims to ensure that the 2012 Cape Town Agreement will enter into force by the 10th anniversary of its adoption, on October 11, 2022.
4. A total of 46 countries have signed this declaration to indicate their determination to ratify the 2012 Cape Town Agreement.

- **International Maritime Organization**
IMO is a specialized agency of the United Nations, founded on 17 March 1948.
- Currently, it has 174 Members.
- IMO is responsible for measures to improve the safety and security of international shipping and to prevent pollution from ships.
- It is also involved in legal matters, including liability and compensation issues and the facilitation of international maritime traffic.

AUTOMATED FACIAL RECOGNITION SYSTEM (AFRS)

Government of India has asked the IT companies to send proposals to **National Crime Record Bureau** (NCRB) to install world's largest facial recognition system.

1. It will create National Automated Facial Recognition System (AFRS).
2. Automated Facial Recognition System involves a large database of photos as well as videos of peoples' faces and biometric software.
3. The software maps facial features of an individual mathematically.
4. It also stores the data as a faceprint in the database.
5. Then, a new image of an unidentified person is often taken from CCTV footage is compared to the existing database to find a match and identify the person.
6. Cyber experts have cautioned that the Automated Facial Recognition System can be used as a controlling tool by the government and transform India into a police state.

7. In the absence of data protection law, Indian citizens will be more vulnerable to privacy abuses if AFRS is used.
8. The use of surveillance cameras and facial recognition constrict the rights of particular class of people.
9. Moreover, even facial recognition systems are not 100% accurate.
10. Therefore, there can be chances of mistaken identity.

KEELADI EXCAVATIONS

Findings during keeladi excavations in September proved that history of Sangam era earlier considered as old as 3rd century BC, is as old as 6th century BC.

1. ASI unearthed large-scale brick structures and associated artefacts of high value which suggests an active urban life in 6th century BC.
2. Sangam period is the period of history of ancient Tamil Nadu and Kerala (known as Tamilakam) spanning from c. 6th century BCE to c. 1st century CE.
3. It is named after the famous Sangam academies of poets and scholars centered in the city of Madurai.
4. Based on period of composition, Melkanakku- Works composed between 200 BCE to 100 BCE is Oldest surviving Tamil poetry.
5. Kilkanakku- Works composed between 100 CE and 500 CE, Collection of 18 poetry compositions
6. Mostly composed before the age of the Pallavas
7. Chief works include Thirukkural, Palamoli, naladiyar, etc.
8. Aham (Inner)- Abstract discussion on human aspects such as love, sexual relations, etc.
9. Puram (outer)- Human experiences such as heroism, customs, social life, ethics, philanthropy, etc.

SINDHU SUDARSHAN

Indian Army is going to conduct an exercise code named 'Sindhu Sudarshan'.

1. It is in Rajasthan from 29 November to 4 December 2019.
2. The aim of the exercise is to evaluate the capability of the Defence forces to strike deep into enemy territory in an integrated air-land battle.
3. Further, the exercise will also see the participation of newly formed **Integrated Battle Groups (IBGs)** along the Western Front.
4. IBGs are brigade-sized, agile, self-sufficient combat formations which can swiftly launch strikes against adversary in case of hostilities.
5. Each IBG is tailor-made based on Threat, Terrain and Task.
6. The resources will be allotted based on the three Ts.
7. The IBGs are defensive and offensive.
8. The offensive IBGs are trained to quickly mobilise and make thrust into enemy territory for strikes.
9. On the other hand, the defensive IBGs are trained to hold ground at vulnerable points or where enemy action is expected.
10. Integrated Battle Groups both on the Western and Northern borders.

MeitY START-UP SUMMIT

Ministry of Electronics & Information (MeitY) has unveiled a series of new initiatives during the first MeitY Start-up Summit held in New Delhi.

1. The initiatives include the MeitY Start-up Hub (MSH), the Indian Software Product Registry and select Incubation Centres under the TIDE 2.0.
2. It will act as a platform to connect with incubators, accelerators, mentors, and eventually, angel funds and venture capitalists
3. It will be a single-window portal for cataloguing all companies and products developed in India with key analytics, category-wise listing and options to port the database to the Government e-Marketplace (GeM) for enhanced market access.

TIDE Scheme

- TIDE scheme was launched in 2008
- The scheme aims to assist institutions of higher learning to strengthen their Technology Incubation Centers and enable young entrepreneurs to initiate technology startup companies for commercial exploitation of technologies developed by them.
- The **TIDE 2.0** will be aimed at strengthening close to 2,000 technology start-ups in areas of national concern, by leveraging emerging technologies and empowering 51 incubation centres across the country.

SMALLEST OZONE HOLE IN DECADES

During September and October months of 2019, the ozone hole over the Antarctic has been the smallest observed since 1982.-

1. It is a part of the stratosphere which extends 10 to 40kms above earth's surface.
2. Ozone layer acts as a sunscreen by shielding the Earth from harmful ultraviolet radiation.
3. On the other hand, close to the surface, ozone created as a by-product of pollution can trigger health problems such as asthma and bronchitis.
4. Ozone-depleting gases like chlorofluorocarbons (CFCs), HCFCs, halons, destroy this protective shield and causes the hole in the ozone.
5. Each spring over Antarctica, atmospheric ozone is destroyed by chemical processes.
6. This creates the ozone hole which occurs because of special meteorological and chemical conditions that exist in that region.
7. The presence of abnormal weather patterns in the atmosphere over Antarctica is responsible for shrinkage of the ozone hole.
8. In warmer temperatures like in 2019, fewer polar stratospheric clouds were formed which limited the ozone-depletion process.
9. However, the shrinking of the ozone hole is not a sign of a recovery of atmospheric ozone but the result of the temporary warming of Antarctica.

DIGITAL BHARAT DIGITAL SANSKRITI

Union Ministry of State for Culture & Tourism has launched the **E-Portal** of Centre for Cultural Resources and Training (CCRT) '**Digital Bharat Digital Sanskriti**'.

About the Digital Bharat Digital Sanskriti:

1. The 'Digital Bharat Digital Sanskriti' is an E-portal that will enable dissemination of cultural education

CCRT

The Centre for Cultural Resources and Training (CCRT) is an autonomous organisation under the Ministry of Culture of Government of India.

It was established in 1979 to support cultural education.

- through digital interactive medium into classrooms all over the country.
2. The portal will provide a platform for specifically dropout children so that they can join the mainstream and pursue their dreams by making a career out of be it music, painting, or any other art forms.
 3. For this initiative, CCRT has tied up with Routes 2 Roots, an NGO for connecting seamlessly all the CCRT Regional Centres.

GOVERNMENT LAUNCHES BHIM 2.0

The Ministry of Electronics and Information Technology (MeiTY) has launched BHIM 2.0 with additional features.

1. Bharat Interface for Money (BHIM) is Unified Payments Interface (UPI) based payment interface application that allows real time fund transfer.
2. The app has been launched in 2016.
3. It was developed by the National Payments Corporation of India (NPCI).
4. The BHIM 2.0 supports three additional languages-Konkani, Haryanvi and Bhojpuri, over and above existing 13.
5. The existing cap of Rs. 20,000 has also been increased to Rs. 1,00,000, from verified merchants.
6. The app has also added features such as (a) linking multiple bank accounts (b) offers from merchants and (c) gifting money among others.
7. Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application of any participating bank.
8. The interface has been developed by National Payments Corporation of India (NPCI).
9. It merges several banking features, seamless fund routing & merchant payments into one hood.
10. It also caters to the Peer to Peer collect request which can be scheduled and paid as per requirement and convenience.

INDIA – US DEFENCE TECHNOLOGIES AND TRADE INITIATIVE (DTTI)

Recently, the ninth India-US Defence Technologies and Trade Initiative (DTTI) group meeting has concluded in New Delhi.

1. The Defence Technologies and Trade Initiative (DTTI) mechanism was launched in 2012. It is not a treaty or a law.
2. It aims to include strengthening India's defence industrial base, exploring new areas of technological development and expanding U.S.-India business ties.
3. The initiative is led by Undersecretary of Defence for Acquisition and Sustainment from the United States and Secretary for Defence Protection from India.
4. Transform the bilateral defense relationship into one that is limited only by independent strategic decisions rather than bureaucratic obstacles or inefficient procedures.
5. Strengthen India's defense industrial base by moving away from the traditional buyer-seller dynamic toward a more collaborative approach.
6. Explore new areas of technological collaboration from science and technology cooperation through co-development and co-production.
7. Expand the U.S.-Indian business ties.

ANTHRAX

- Recently, Veterinarians have confirmed anthrax as the cause of death of two **Asiatic Water Buffaloes** in central Assam's **Pobitora** Wildlife Sanctuary.
- Pobitora Wildlife Sanctuary is situated in the flood plains of River Brahmaputra in the district of Morigaon and about 45 kms from Guwahati, the capital of Assam.
- It harbors the highest density of Rhino in the world and the second highest concentration of Rhino in Assam after Kaziranga National Park. Besides rhinoceros, the other mammals found are Leopard, Leopard cat, Fishing cat, Jungle cat, Feral Buffalo, Wild pigs, Chinese pangolins among others.

Anthrax

1. Anthrax is an infectious disease caused by the bacterium *Bacillus anthracis*.
2. The bacteria live in soil and usually infect wild and domestic animals such as goats, cattle and sheep.
3. However, humans, pigs and dogs are comparatively less susceptible and only get infected if exposed to copious amounts of spores.
4. Anthrax responds well to antibiotic treatment but vaccines are necessary as the infection can cause death within two-three days leaving no scope for diagnosis and treatment.
5. Anthrax does not spread directly from one infected animal or person to another as it spread by spores.
6. These spores can be transported by clothing or shoes.

EX EASTERN BRIDGE – V

Indian Air Force will be participating in a Bilateral Joint exercise with Royal Air Force Oman (RAFO) named EX EASTERN BRIDGE-V.

1. The exercise EASTERN BRIDGE-V will be held at Air Force Base Masirah in Oman.
2. The exercise was first held in 2009.
3. The joint exercise aims to improve interoperability during mutual operations between both Air Forces and it will provide an opportunity to learn from each other's best practices.
4. It will be for the first time when MiG-29 fighter aircraft will be participating in an international military exercise outside India.
5. On the other hand, Royal Air Force of Oman contingent comprises of F-16 next generation fighter jet, Hawk fighter aircraft and Oman's Euro fighter Typhoon.
6. Naseem-al-Bahr is a bilateral biennial naval exercise between India and Oman.
7. AL NAGAH is a bilateral military exercise between India and Oman.

MOUNT PAEKU

1. Paektu Mountain is also known as **Baekdu Mountain**
2. In China, it is known as Changbai Mountain.
3. It is a volcanic mountain that had last erupted over 1,000 years ago.
4. The mountain is situated at the border between North Korea and China.
5. At a height of about 9,000 feet, it is also the highest peak in the Korean Peninsula.

INDIA INNOVATION INDEX

NITI Aayog with Institute for Competitiveness as the knowledge partner has released the India Innovation Index 2019.

1. The Index is calculated as the average of the scores of its two dimensions – Enablers and Performance.
2. The Enablers are the factors that underpin innovative capacities. They are grouped into five pillars: (1) Human Capital (2) Investment (3) Knowledge Workers (4) Business Environment and (5) Safety and Legal Environment.
3. The Performance dimension captures benefits that a nation derives from the inputs. It is divided into two pillars (6) Knowledge Output and (7) Knowledge Diffusion.
4. Karnataka has emerged topper in the overall rankings in the category of major states with Tamil Nadu and Maharashtra in the second and third positions.
5. Karnataka's top position is partly attributed to its top rank in the Performance dimension.
6. Maharashtra performs the best in the dimension of Enablers.
7. Among the North-Eastern states and Union territories, Sikkim and Delhi occupy the top spots respectively.
8. Delhi, Karnataka, Maharashtra, Tamil Nadu, Telangana, and Uttar Pradesh are the most efficient states in translating inputs into output.
9. Bihar, Jharkhand, and Punjab were the least attractive states for investment.

Global Innovation Index

- The **Global Innovation Index (GII)** is an annual ranking that quantifies the state of national innovation ecosystem across countries. In 2019, it has ranked 129 countries based on 80 indicators.
- The GI is co-published by World intellectual property organisation (WIPO), Cornell University and INSEAD.
- India has improved its ranking by five places to 52nd in 2019 from 57th position in 2018.

RANGDUM MONASTERY

The Archaeological Survey of India is planning to declare the **Rangdum** Monastery located in Ladakh (Kargil district) as a monument of national importance.

1. Rangdum Monastery is a Tibetan Buddhist monastery belonging to the Gelugpa sect.
2. It is situated on top of a hill at an altitude of 13,225 ft at the head of the Suru Valley in Ladakh.
3. The main highlight of the monastery is its central prayer hall with a collection of Tibetan and other artifacts.
4. The move aims to look into the opportunities for expansion of tourism in the Ladakh region in the backdrop of the decision to split Jammu and Kashmir into two Union Territories.
5. ASI was founded in 1861 by Alexander Cunningham who was the first Director-General of ASI.
6. The Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958 defines archaeological site and remains as any area which contains or is reasonably believed to contain ruins or relics of historical or archaeological importance which have been in existence for not less than 100 years.
7. When any archaeological site and remains is declared to be of national importance it is called protected area under AMASR Act.

TULAGI ISLAND

A Chinese company has signed an agreement to lease Tulagi Island in the Solomon Islands for 75 years.

1. Tulagi is a small island Solomon Islands, just off the south coast of NgellaSule (Florida islands).
2. It is about two square kilometres (0.8 square miles) with a population of 1,200.
3. The agreement with Chinese company mentions developing a refinery on the island.
4. However, its potential for dual use as a Chinese military base is certain to raise concerns with the United States and Australia.

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