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# **CHROME IAS ACADEMY**

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**ESSENTIAL FACTS –  
March 2019**

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**PRELIMINARY EXAMINATION - 2019**

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Essential Facts is the collection of most important news which is relevant for Civil Services Preliminary Examination. **Chrome IAS** firmly believes that this compilation will be helpful for the aspirants and will add on to their existing knowledge base.

Rig-Veda brilliantly sums up the essence of the process of preparation in a single quote, wherein it says, “**Let noble thoughts come to us from all directions**”. Chrome IAS is gradually trying to become a major stakeholder in the journey of becoming a civil servant.

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**AGRICULTURE**

**Fisheries**

- India is the world's second-largest fish producer.
- Constituting about 6.3 per cent of global fish production, the sector contributes 1.1 per cent of the GDP and 5.15 per cent of the agricultural GDP.
- It accounts for around 10 per cent of the total exports of the country and nearly 20 per cent of the agricultural exports.

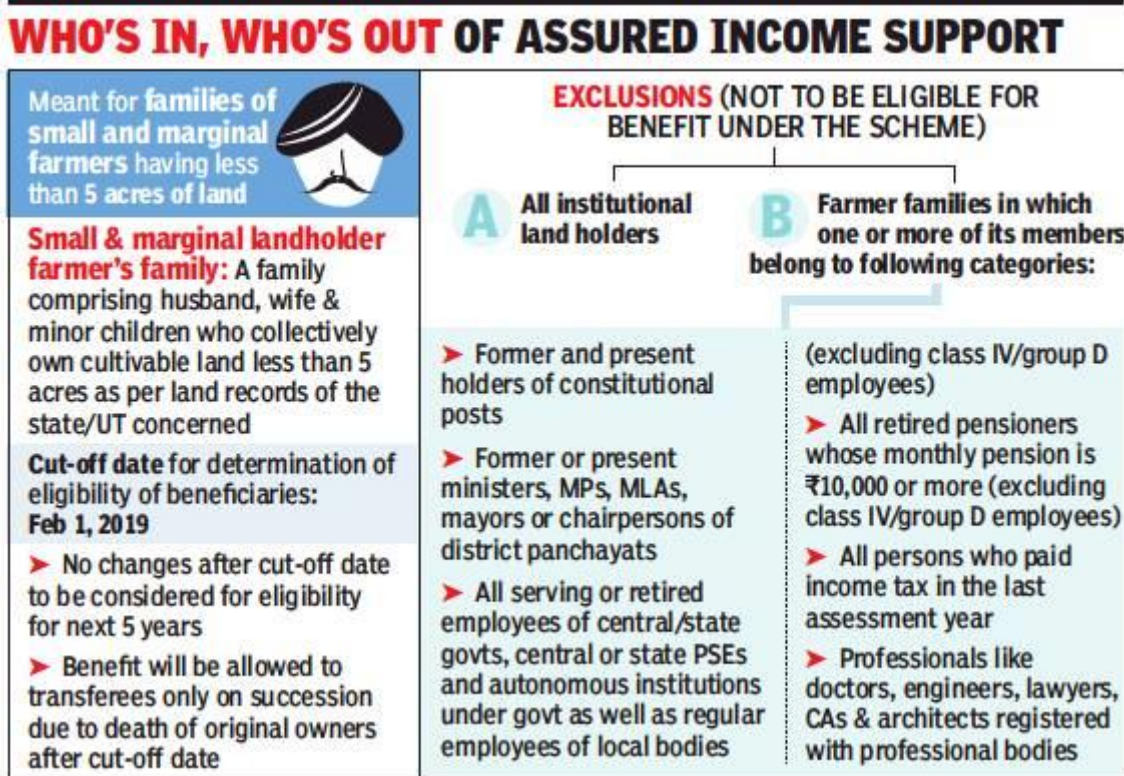
**Categorisation of Farmers**

- Marginal : Below 1.00 hectare
- Small : 1.00-2.00 hectare
- Semi- Medium : 2.00-4.00 hectare
- Medium : 4.00-10.00 hectare
- Large : 10.00 hectare and above
- The operational holdings are also classified in three social groups, viz., Scheduled Castes, Scheduled Tribes and Others.

**PM-KISAN**

- PM-KISAN scheme, which will enable cash transfers to small and marginal farmers, will be headed by a chief executive officer (CEO) and the programme will run on a centralized software platform with real-time monitoring.
- an official familiar with the details of the initiative said on condition of anonymity.
- To implement the scheme, the government will rely on a 'management information system platform', a software that will connect states, banks and farmers
- The scheme will offer Rs 6,000 a year in three instalments to all farmers who own cultivable land parcels under two hectares.
- The CEO will be a civil servant.
- Cash will be transferred by the Centre to beneficiaries electronically through the "State Notional Account", a mechanism similar to the one being used for paying beneficiaries of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).

- Each inclusion of beneficiaries will need to be accompanied by a self-declaration that the prospective beneficiary doesn't fall within the criteria of those excluded from the scheme, such as taxpayers and government employees.



### Jute

- The government has increased the minimum support price (MSP) for raw jute by ₹250 per quintal, taking the price to ₹3,950 per quintal for the 2019-20 season.
- India is the world's largest producer of raw jute and West Bengal accounts for the majority of the country's production.

### Rainfed Farming

- Rainfed agriculture contributes to 60 per cent of the value of agriculture GDP of India.
- However, there is a clear-cut bias towards irrigated areas when it comes to public investment in agriculture in the country.

- This neglect, together with unsuitable programme design, has ensured that potential of rain-fed areas remains unrealised.
- While farmers in irrigated areas earn 60 per cent of their income from agriculture, their counterparts in rainfed areas earn only 20-30 per cent from farm-related activities.
- While the average yield in rainfed areas is about 1.1 tonnes per hectare, that in irrigated areas is about 2.8 tonnes per hectare.
- About 61 per cent of India's farmers rely on rainfed agriculture and 55 per cent of the gross cropped area is under rainfed farming.
- While the government spent ₹5,40,000 crore on procuring rice and wheat at MSP (Minimum Support Price) between 2003-04 and 2012-13, its expenditure on procurement of major rainfed crops such as coarse cereals, millets and pulses during the same period was merely ₹3,200 crore.

### DEFENCE

#### BOLD-QIT

- The govt is to inaugurate the project BOLD-QIT (Border Electronically Dominated QRT Interception Technique) under CIBMS (Comprehensive Integrated Border Management system) on India-Bangladesh border in Dhubri District of Assam.
- Border Security Force is responsible for safeguarding of 4,096 Km long International Border with Bangladesh.
- At various places, it is not possible to erect Border Fence due to the geographical barriers.
- The 61 Kms of Border area in District Dhubri, Assam where River Brahmaputra enters into Bangladesh is consisting of vast char lands and innumerable river channels thus making border guarding in this area, a daunting task especially during rainy season.
- To overcome this problem, in the year 2017, Ministry of Home Affairs decided to go for technological solution besides the physical presence of manpower of BSF.
- In Jan, 2018, Information and Technology Wing of BSF undertook the project BOLD-QIT (Border Electronically Dominated QRT Interception Technique) and completed it in record time with the technical support of various manufacturers and suppliers.
- BOLD-QIT is the project to install technical systems under the Comprehensive Integrated Border Management System (CIBMS), which enables BSF to equip Indo-Bangla borders with different kind of sensors in unfenced riverine area of Brahmaputra and its tributaries.
- Now, the entire span of River Brahmaputra has been covered with data network generated by Microwave communication, OFC Cables, DMR Communication, day and night surveillance Cameras and intrusion detection system.
- The implementation of this project will not only help BSF to curb all type of cross border crimes but also provide respite to the troops from round the clock human surveillance.

#### Assam

- A digital 'barrier' has finally filled a 61 km gap on the 4,096.7 km India-Bangladesh border fence.
- Assam shares a 263 km border with Bangladesh.

- Much of the border was fenced, but a 61 km stretch in Dhubri district remained open owing to the terrain dictated by the Brahmaputra.
- The central govt inaugurated an electronic surveillance system that is expected to diminish challenges faced by the Border Security Force in manning this stretch against cross-border crimes.
- Comprising microwave communication, optical fibre cables, cameras, and an intrusion detection device, this system is called BOLD-QIT (Border Electronically Dominated QRT Interception Technique) and was established under the Comprehensive Integrated Border Management System.

### Chakra III

- India sealed a \$3-billion deal with Russia for leasing a nuclear-powered attack submarine for the Indian Navy for a period of 10 years.
- Under the pact, Russia will have to deliver the Akula class submarine, to be known as Chakra III, to the Indian Navy by 2025.
- It will be the third Russian submarine to be leased to the Navy.

### Pinaka

- The Defence Research and Development Organisation successfully tested-fired Pinaka.
- Pinaka is an indigenously developed guided rocket system.

### Boeing 737 MAX 8

- DGCA bars Boeing 737 MAX 8 after global alarm.
- SpiceJet is the only Indian airline that operates Boeing 737 MAX 8 aircraft.
- The move came after European aviation regulator EASA, the U.K, France, Germany, Australia and Singapore joined a growing number of countries that have barred the aircraft from their airspace following crash of an Ethiopian Airlines plane.

### Scorpene submarines

- The Navy is set to induct the second Scorpene submarine Khanderi.
- The remaining submarines in the series are in advanced stages of manufacturing and trials.
- Khanderi was launched into water in 2017.
- The fourth submarine Vela is ready to be launched into water for trials.
- Mazagon Dock Limited (MDL), Mumbai, is manufacturing six Scorpene submarines under technology transfer from Naval Group of France.
- The first submarine of the class Kalvari joined service in December 2017.
- The third in the Scorpene series Karanj which was launched in January last year is in advanced stage of trials.
- The last two submarines Vagir and Vagsheer are in advanced stages of manufacturing .
- The 'Boot Together' is where the five separate sections are welded together to form the submarine.
- Kalvari is the first modern conventional submarine inducted by the Navy in almost two decades.

### TROPEX

- TROPEX stands for Theatre Level Operational Readiness Exercise.
- It is the largest war game of the Navy.
- It is an inter-service military exercise involving the participation of the Indian Army, Air Force, Navy and the Coast Guard.

### Sea Vigil

It is the largest coastal defence exercise conducted this January with the participation of all 13 coastal States and UTs along with all maritime stakeholders.



### Anti-Satellite Missile

- India successfully conducted an Anti-Satellite (ASAT) missile test, named Mission Shakti.
- India thus became the fourth country in the world to demonstrate the capability to shoot down satellites in orbit. So far, only the United States, Russia and China have this prowess.
- Scientists shot down a live satellite in the Low Earth Orbit (LEO) at 300 km in space.
- The satellite downed by the ASAT missile was Microsat-R.
- A LEO of 300 km was chosen to “minimise” debris and it also won’t last more than a few months.
- Anti-satellite weapons provide the capability to shoot down enemy satellites in orbit thereby disrupting critical communications and surveillance capabilities.
- ASAT missiles also act as a space deterrent in dissuading adversaries from targeting the country’s satellite network.

### ASAT

- The satellite targeted with an Anti-Satellite (ASAT) missile under Mission Shakti has broken up into at least 270 pieces, most of which are expected to disintegrate within 45 days.
- Being in the Low Earth Orbit, the debris would fall towards earth and burn up as soon as they enter the atmosphere. Imaging satellite
- The targeted satellite was Microsat-R.
- Microsat-R was shot down with a modified exo-atmospheric missile of the ballistic missile defence at an altitude of 300 km.

### Terror Monitoring Group

- The Ministry of Home Affairs (MHA) is keeping a close watch on illegal flow of funds to fuel militancy in Jammu and Kashmir, and announced the setting up of a Terror

Monitoring Group (TMG) aimed at taking “coordinated action against terror funding”.

- Advertising As per the order issued by MHA, the terms of reference of the TMG include, “taking action against hardcore sympathisers among government employees including teachers etc providing overt or covert support to such activities”.
- It charges the TMG with action against all registered cases related to terror, terror financing and terror-related activities and bring them to a logical conclusion.
- The seven-member TMG shall be headed by the Jammu and Kashmir additional director general of police (ADGP). It shall also have representatives from the Intelligence Bureau (IB), CBI, NIA, Central Board of Direct Taxes (CBDT), and Central Board of Indirect Taxes and Customs (CBIC). The Jammu and Kashmir police inspector-general shall be the seventh member of the TMG.
- However, the Enforcement Directorate (ED), which has attached several properties in terror funding cases, did not find mention in the order.

**ECONOMY****Pulses MSP**

- India's minimum support price (MSP) programme for pulses has come under greater scrutiny at the World Trade Organization (WTO) with the US, Canada and Australia serving it a formal counter-notification, alleging that the subsidy involved was much higher than the permitted cap.
- Defending itself at the agriculture committee meeting this week in Geneva, India said the calculations of MSP made by the US and Canada were incorrect and stressed that its price support programme for pulses was only to ensure nutrition supply for 195 million poor people.
- The five pulses covered under MSP are chickpeas, pigeon peas, black matpe, mung beans and lentils. Contrary to India's reported number of 1.5 per cent of total value of production, Canada and the US believed India's MPS (market price support) for pulses was actually between 31-85 per cent, vastly exceeding its de minimis limits (cap) of 10 per cent of the total value of production.
- Although India and a number of developing countries have been demanding that food procurement subsidies should not be capped, WTO members are yet to arrive at a "permanent solution" to the problem

**National Mineral Policy 2019**

Some of the features in the policy include:

- the introduction of the right of first refusal for the reconnaissance permit (RP)
- encouraging the private sector to take up exploration and the auctioning of virgin areas on a revenue- sharing basis.

**RBI Task force**

- The Reserve Bank of India has constituted an eight-member task force, headed by Usha Thorat to appropriate policy measures to ensure the stability of the external value of the rupee.
- The terms of reference of the task force include
  - assessing the causes behind the development of the offshore rupee market;

- study the effects of the offshore markets on the rupee exchange rate and liquidity in the domestic market; and
- recommend measures to address concerns, if any, that may arise out of offshore rupee trading.
- The task force will also propose measures to generate incentives for non-residents to access the domestic market.
- It will also examine the role, if any, that the International Financial Services Centres (IFSCs) can play in addressing these concerns.

### Manufacturing PMI

- Manufacturing activity expanded to a 14-month high of 54.3 in February.
- A reading over 50 denotes an expansion in activity and one below 50 shows a contraction.

### Sovereign Patent Fund

- The National Electronics Policy (NEP) 2019 aims to create a Sovereign Patent Fund (SPF) — a State-led investment fund that will acquire Intellectual Property (IP) assets important to national economic objectives.
- The fund can develop a domestic innovation ecosystem, acquire critical IP and reduce the knowledge gap, as well as help generate new businesses based on the IP assets owned by Indian corporates.
- Through the SPF, India can have licensing deals with IP holders and secure IP for Indian manufacturing units, thus connecting technical know-how with business needs.

### Turant

- In a bid to enter the top 50 ranking in The World Bank's Ease of Doing Business (EoDB) Index, the Customs Department has announced further reforms under the name of Turant Customs for speedy clearance of goods at air and sea ports.
- A critical component of EoDB index rankings 2019 is the 'Trading Across Borders' category in which India is ranked 80, as compared with 146 in 2018. This was possible due to reforms like Single Window Interface for Facilitating Trade, e-Sanchit

(e-Storage and computerised handling of indirect tax documents), and Direct Port Delivery.

- Now, under Turant Customs, one of the major changes will be in Indian Customs Electronic Data Interchange System (ICES) 1.5 for clearance of imported goods after assessment and duty payment.
- The officer concerned will now have access to a fully automated queue of Bill of Entry ready for granting clearance in ICES 1.5. This obviates the necessity of importers having to present the BoE number and date to the officer for clearance. So, the officer will be able to immediately provide clearance on the system. Turant Customs will reduce dwell-time.

### Reciprocal Tax

- A reciprocal tax is charged on an import from another country that charges the U.S. a similar amount to export an American product into its market.
- It acts essentially as a tariff.

### CPSEs

- The NITI Aayog has been tasked with drawing up a list of non-core assets of various CPSEs, both healthy and sick ones, as a first step towards Finance Ministry's plan to monetise such assets and unlock value to shareholders.
- This is part of the overall plans of the government to lay down a procedure and mechanism for monetisation of non-core assets of central public sector undertakings (CPSEs), that include mainly land and building.
- The report by NITI Aayog would be taken up by the alternative mechanism on disinvestment, headed by Finance Minister.
- So far, the disinvestment process was confined to the corporate level. Now, it will go one step down and monetise non-core assets of CPSEs to unlock wealth and generate value on equity for shareholders.

### SWIFT

- The Reserve Bank of India (RBI) has slapped penalties on seven more commercial banks for not adhering to regulatory directions relating to global messaging platform SWIFT.
- Over the last few days, RBI has fined 11 banks-both public and private- for delayed implementation of SWIFT-related operational controls.
- SWIFT is the global messaging software used for transactions by the financial entities.

### BSE Midcap and BSE Smallcap

- BSE introduced the new index series called 'BSE MID-Cap' index and 'BSE Small-Cap' index to track the performance of companies with relatively smaller market capitalization.
- BSE-500 Index - represents more than 93% of the listed universe.
- Companies with large market capitalization bias the movement of BSE-500 index.
- This necessitated construction of a separate indicator to capture the trend in companies with lower market capitalization.
- Companies with more than Rs 10,000 crores of market cap are large cap companies.
- Companies with market caps between Rs 500 to 10,000 crores are mid cap companies.
- Companies with market cap of less than Rs 500 crores are small cap companies.

### MSME Jobs

- The number of net jobs created in the Micro, Small and Medium Enterprises (MSME) sector in the last four years stood at just 3,32,394.
- The survey shows just three States — Maharashtra, Gujarat, and Telangana — accounted for over 50% of the jobs created in this period (2015-16 to 2018-19).
- It also shows that 73% of the jobs were created by micro enterprises.
- “‘Net jobs created’ is defined as recruitment, less exits,”.

### SBI

- In a first of its kind, State Bank of India has decided to link the interest rate paid on savings bank balance of over ₹1 lakh to the repo rate — the key policy rate set by Reserve Bank of India.
- Also, the bank will link cash credit accounts and overdrafts, with limits above ₹1 lakh, to the repo rate.
- The move comes ahead of the April 1 deadline for banks to link the lending rate to the external benchmark which is aimed at increasing the effectiveness of monetary transmission.
- Most banks are likely to link their lending rates to the repo rate.

### White Label ATM

- In a step to boost activities of white label automated (WLA) teller machine operators, the RBI has allowed such entities to buy wholesale cash, above a threshold of 1 lakh pieces of any denomination, directly from the RBI and currency chests against full payment.
- WLAs are also allowed to source cash from scheduled banks, including cooperative banks and regional rural banks.

### Gold Holding

- India, which is the world's largest consumer of gold, has the 11th largest gold reserve, with the current holding pegged at 607 tonnes, as per the latest report by the World Gold Council (WGC).
- India's overall position in terms of total gold holding would have been tenth had the list included only countries.
- Whereas, International Monetary Fund (IMF) is included and is third on the list with total gold reserves of 2,814 tonnes.
- The top slot is occupied by the U.S. followed by Germany.

### SEBI

- Markets regulator SEBI withdrew the 20% limit on investments by Foreign Portfolio Investors (FPIs) in corporate bonds of an entity.
- In June last year, SEBI had mandated that no FPI shall have an exposure of more than 20% of its corporate bond portfolio to a single corporate.

### Forex Swaps

- The Reserve Bank of India (RBI) has decided to inject rupee liquidity into the system through long-term foreign exchange buy/sell swap — a first-of-its-kind instrument used for liquidity management.
- The RBI would conduct dollar-rupee buy/sell swap auction of \$5 billion for a three-year tenor on March 26.
- The move is seen to lower the dependence on open market operations which have been a significant amount of the overall borrowing.
- The move would boost RBI's foreign exchange reserves which is around \$402 billion.

### RBI's \$5 billion plan

- The Reserve Bank of India's \$5 billion tool for liquidity creation is likely to result in faster transmission of interest rates in the banking system and improve liquidity in the banking system at a time when banks are hesitant to pass on rate cut benefits to customers and liquidity is still in deficit mode.
- RBI decided to inject rupee liquidity for three years through long-term foreign exchange Buy/Sell swap.
- Under this, the RBI will buy up to \$ 5 billion from the market via auction and simultaneously sell it back to the same counterparties.
- Whatever amount of dollars get mopped up via these operations will reflect in the RBI's foreign exchange reserves for the tenor of the swap while also reflecting in RBI's forward liabilities.
- The RBI's move to inject liquidity by swapping billion with rupees is aimed at improving the interest rate transmission in the economy.



- Injection of liquidity is likely to put downward pressure on interest rates in the economy, while at the same time preventing any sharp appreciation of the domestic currency on the back of increased foreign fund inflows.

### Rupee

- The rupee has been steadily appreciating in recent days.
- Strong inflow in both debt and equity segments helped the currency to hit a six-month high against the dollar.
- The recent decision of the RBI for a currency swap to infuse rupee liquidity is expected to bring down hedging cost, prompting inflows.

### FSDC

- The Government formed the Financial Stability and Development Council in 2010.
- It was formed due to the tussle between SEBI and IRDA on the regulation of ULIPs.
- Basically, the activity of the Council is to coordinate financial and economic regulations through consultations of the heads of the various regulatory organizations.
- It is non-statutory body.
- The Chairman of the Council is the Finance Minister and its members include the heads of financial sector Regulators (RBI, SEBI, PFRDA, IRDA & FMC Finance Secretary and/or Secretary, Department of Economic Affairs, Secretary, Department of Financial Services, and Chief Economic Adviser.

### NCLAT

- National Company Law Appellate Tribunal (NCLAT) was constituted under the Companies Act, 2013. Thus, it is a statutory body.
- It was constituted for hearing appeals against the orders of National Company Law Tribunal(s) (NCLT), with effect from 1st June, 2016.
- NCLAT is also the Appellate Tribunal for hearing appeals against the orders passed by NCLT(s).

- NCLAT is also the Appellate Tribunal for hearing appeals against the orders passed by Insolvency and Bankruptcy Board of India.
- NCLAT is also the Appellate Tribunal to hear and dispose of appeals against any direction issued or decision made or order passed by the Competition Commission of India (CCI).

### National Anti-Profiteering Authority

- Consumer complaints are not the only trigger for the National Anti-Profiteering Authority (NAA) to act.
- Mock purchases can be made by NAA offices to check a trader's invoice for profiteering.
- The NAA was set up under Section 171 of the Central GST Act, 2017 to check whether trade and industry were passing on rate reductions under the Goods and Services (GST) Tax.
- Besides interested parties, the NAA chairman, as a civilian, could also take note of any instance.

### Tea Industry

- The north Indian tea industry wants output regulation, as it is facing the challenge of oversupply, which is dampening prices.
- While tea production in India logged a compounded annual growth rate (CAGR) of 3.2% between 2012 and 2017, consumption increased by a mere 1.7% in the period.
- Assam accounts for half of India's tea output.

### Rupee-Dollar Swap

- The RBI's decision to infuse rupee liquidity through long term foreign exchange swap, a first of its kind in liquidity management policy, is likely to boost investments by foreign portfolio investors under the voluntary retention route (VRR).s
- The central bank will conduct dollar-rupee buy/sell swap action of \$5 billion for a three-year tenor, on March 26.

- Such a swap route has been explored by various emerging market economies as an effective tool to manage liquidity.
- Apart from liquidity infusion, the move will boost the country's foreign exchange reserves and is likely to support the exchange rate.
- Introduced on March 1 by RBI, the VRR for investments by foreign portfolio investors (FPIs) is subject to a minimum retention period of three years from the date of allotment.
- Investments under VRR (by all FPIs taken together) are capped at ₹40,000 crore for government securities and ₹35,000 crore for corporate debt securities.

### Tea exports

- Tea exports may end at a level of over 240 million kg in 2018-19.
- Confederation of Independent States (CIS) region includes Russia, Ukraine and Kazakhstan and is the single largest importer at over 50 million kg.

### Disinvestment

- The government has overshoot its disinvestment target for the second consecutive year.
- As against a target of ₹80,000 crore for disinvestment for the current year, the divestment receipts have touched ₹85,000 crore.
- In 2017-18, the government had earned a little more than ₹1 lakh crore from disinvestments against a target of ₹72,500 crore.

### EPCG

- EPCG is an export promotion scheme under which an exporter can import certain amount of capital goods at zero duty for upgrading technology related with exports.
- The move was aimed at giving relief to exporters as they do not have to pay IGST at the initial point itself.

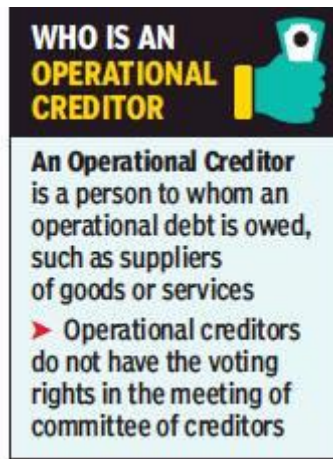
- EPCG is an export promotion scheme under which an exporter can import certain amount of capital goods at zero duty for upgrading technology related with exports. On the other hand, advance authorisation is issued to allow duty free import of inputs, which is physically incorporated in export product.
- The move was aimed at giving relief to exporters as they do not have to pay IGST at the initial point itself. In the GST regime, they have to pay the indirect tax and then seek refund, which is a cumbersome process.

### Forex reserves

- India's foreign exchange reserves increased by \$3.6 billion to \$405.64 billion.
- Foreign currency assets (FCA), which form a key component of reserves, rose by \$3.54 billion to \$377.773 billion.
- FCAs are maintained in major currencies like US dollar, euro, pound sterling and Japanese yen.
- The increase in foreign reserves could partly be attributed to rising investments by foreign investors in the Indian capital markets.

### Operational creditor

- The National Company Law Appellate Tribunal (NCLAT) has held that statutory dues, including income tax and value-added tax or goods and services tax, come within the purview of "operational creditors".
- Operational debt also included debt arising under any law payable to the central and state governments.
- Operational debt in normal course meant debt arising during the operations of the company.



### Forex Swap

- The Reserve Bank of India successfully executed a \$5 billion forex swap auction in order to facilitate faster transmission of interest rates and improve liquidity in the banking system.
- It bought the targeted \$5 billion as part of the long term dollar/ rupee swap auction with a three-year tenor.
- The amount of dollars get mopped up via these operations will reflect in the RBI's foreign exchange reserves for the tenor of the swap while also reflecting in the RBI's forward liabilities.
- Meanwhile, the system gets rupee equivalent liquidity for the same amount and for the same duration, improving the liquidity.
- While the primary objective of using auction based foreign exchange swap is to infuse the rupee liquidity through an alternate channel, there could be other collateral benefits at the same time.

### SWIFT

- The Reserve Bank of India (RBI) has fined Punjab National Bank (PNB) Rs 2 crore after finding it in violation of compliance with regulatory directions regarding SWIFT operations.
- Swift is a global messaging software used for transactions by financial entities.
- The fine comes in the backdrop of the massive Rs 14,000 crore fraud at the Punjab National Bank (PNB) owing to the misuse of this messaging software.

- SWIFT stands for the Society for Worldwide Interbank Financial Telecommunications.
- It is a messaging network that financial institutions use to securely transmit information and instructions through a standardized system of codes.
- SWIFT assigns each financial organization a unique code that has either eight characters or 11 characters.
- It is only a messaging system – SWIFT does not hold any funds or securities, nor does it manage client accounts.
- Prior to SWIFT, Telex was the only available means of message confirmation for international funds transfer. Telex was hampered by low speed, security concerns, etc.
- To circumvent these problems, the SWIFT system was formed in 1974.

### Rupee Rate Derivatives

- The RBI allowed non-resident Indians (NRIs) to participate in rupee interest rate derivatives segment with a view to deepen the rupee interest rate swap (IRS) market.
- The non-residents can undertake rupee interest rate derivative transactions on recognised stock exchanges, electronic trading platforms and over the counter markets (OTCs).
- A non-resident will be allowed to undertake transactions in the rupee interest rate derivatives markets to hedge an exposure to rupee interest rate risk and other specified purposes.

### MTN

- NTPC said it has launched a medium term notes (MTN) issue to raise \$450 million which is a part of its \$6 billion MTN programme.
- The MTNs are also known as bonds in the overseas markets.
- The funds raised through this issue will be used for capital expenditure by the company.

**ENERGY****Oil Exploration**

- Life of the New Exploration Licensing Policy (NELP) regime may remain only for the next 10-15 years, as the country's entire oil and gas exploration as well as production business is shifting to Hydrocarbon Exploration Licensing Policy (HELP)-Open Acreage Licensing Programme (OALP).
- In India there are mainly three different categories — nomination basis: areas given prior to auction rounds; pre-NELP and NELP: where areas were given through auctions based on production sharing contracts; and HELP regime — a uniform licensing regime based on revenue sharing model and OALP.
- Since NELP was introduced in the late 1990s, 314 blocks have been offered under various auction rounds, of which 254 have been awarded.
- From 2017 all new contracts have been signed under the HELP regime. Although most of the producing blocks in the country, at present, are those that have been offered before NELP or after NELP. All these production sharing contracts have a life.
- OALP is a continuous bidding process.

**Large Hydro Projects**

- According to the new policy, large hydro projects will also be designated as renewable energy projects.
- So far, only smaller projects of less than 25 MW in capacity were categorised as renewable energy.
- With the removal of this distinction, large hydro projects will be included as a separate category under the non-solar renewable purchase obligation policy.

**New Hydro Policy**

- Earlier this month, the Union Cabinet approved a new hydroelectricity policy that, among other things, included large hydro projects within the ambit of renewable energy.

- Prior to the policy, only small hydro projects of a capacity of less than 25 MW were treated as renewable energy. Large hydro projects were treated as a separate source of energy.
- India's renewable energy sector has an installed capacity of 75,000 MW. This made up about 21 % of the overall energy mix, with the rest coming from thermal, nuclear and large hydro sources.
- With the inclusion of large hydro in renewable energy, the energy mix changes drastically. Renewable energy capacity would now be 1,20,000MW or 34 % of the overall energy mix.
- It must be noted that this is a purely cosmetic change. No additional resources have been created through this policy. It is a reclassification of existing capacity.
- The policy has meant a drastic change in the renewable energy mix as well. Whereas earlier, wind energy contributed nearly 50% of all renewable energy capacity, it will now make up only 29 %. Similarly, solar energy's share will fall from 34% to 21%. The hydro sector, however, will see its share grow from just over 6% to over 41%.



**ENVIRONMENT & ECOLOGY**

**FAME**

- The Union Cabinet approved the implementation of second phase of the Faster Adoption and Manufacturing of Electric Vehicles or FAME with an outlay of ₹10,000 crore for three years.
- The main objective is to encourage faster adoption of electric and hybrid vehicles.

**Rhinos**

- International boundaries will not come in the way of conservation of rhinos, said representatives of Asian countries where the one-horned herbivore thrives.
- The New Delhi Declaration underscored trans-boundary collaboration among India, Nepal, and Bhutan for the conservation and protection of the greater one-horned rhino.
- There are no rhinos in Bhutan, but some from the Manas National Park in adjoining Assam or Buxa Tiger Reserve in West Bengal are known to cross over occasionally.
- Indonesia and Malaysia are the other Asian countries where the last of the rhinos live.
- The current global population of the Indian one-horned rhinoceros is 3,584. Assam's Kaziranga National Park has the bulk of 2,938 rhinos in India while Nepal 646.
- Once ranging from China to Bangladesh, the Javan and Sumatran rhinos are nearing extinction.
- The Sumatran rhino, the smallest of all rhino species and the only Asian rhino with two horns, became extinct in the wild in Malaysia.
- Sumatran rhino is critically endangered.

**Forest Fires**

- According to the scientists, forest fires have been occurring in India from at least 60,000 years ago, ever since modern humans appeared here.
- In fact, several native trees and plants in these landscapes have "co-evolved" with fire: fire helps revive dormant seeds of many species.

- The concept of fires being entirely detrimental to these ecosystems, argue the signatory scientists, has been derived from a colonial concept that looked at forests only for their timber potential. As a result, fire exclusion and suppression is the norm.
- Fires even suppressing invasive species.
- High-intensity fires would have negative effects, but they happen only because dry biomass has been allowed to build up and low-intensity controlled burning has been stopped.
- Controlled fires in areas that have huge fuel loads (dry litter and biomass on the forest floor) can help prevent as well as reduce the impact of large fires later in the season.
- If an area is continuously protected from fire, it could catch fire once in four years or so because of the high accumulation of grass, wood and twigs.

### Quinoa

- Scientists in Dubai are developing crops like quinoa that can thrive in the salty soils intruding into the world's crop lands.
- Dubai is trying to help farmers in the Middle East and beyond earn a living from unlikely plants known as halophytes. These plants, from trendy quinoa to obscure salicornia, flourish in salty and arid environments where staple crops like wheat or rice would wither.
- Quinoa is a protein-rich, gluten-free grain that tastes like nutty rice that grows especially well in salty soil.

### Rhinos

- India will collaborate with Bhutan, Nepal, Indonesia and Malaysia to increase the population of three species of Asian rhinos, including the Greater one-horned rhinoceros found in the Indian sub-continent.
- The five rhino range nations signed a declaration 'The Declaration on Asian Rhinos 2019' for the conservation and protection of the species at the recently held Second Asian Rhino Range Countries meeting in Delhi.
- The declaration was signed to conserve and review the population of the Greater one-horned, Javan and Sumatran rhinos every four years to reassess the need for joint actions to secure their future.

### Polluted Cities

- Fifteen of the top 20 most polluted cities in the world are located in India.
- Gurugram in Haryana topped the list.
- Delhi — a frequent fixture on global pollution hotspots — was at the 11th place.
- When ranked by country, Bangladesh emerged as the most polluted followed by Pakistan and India respectively.
- Of the cities analysed, 64% exceeded the WHO's annual exposure guideline (10 micrograms/cubic metre) for fine particulate matter, also known as PM2.5.
- India's annual guidelines range from 40-60 micrograms/cubic metre, depending on whether they are residential or industrial areas.
- Every single one of measured cities with data in the Middle East and Africa exceeded the WHO guideline.

### Forest Survey

- A committee constituted by the govt has recommended that forest surveys — the biennial exercise by the government to estimate forest cover — explicitly demarcate trees grown in forests from those grown outside, that is, in plantations and private lands.
- Currently, the government counts both towards estimating the portion of India's geographical area covered by forest.
- India posted a marginal 0.21% rise in the area under forest between 2015 and 2017.
- India has about 7,08,273 sq. km. of forest, which is 21.53% of the geographic area of the country (32,87,569 sq. km.).
- Getting India to have at least 33% of its area under forest has been a long-standing goal of the government since 1988.

### Aves Island

- The Environment Ministry has amended laws that now allow a proposed tourism project in the Aves Island, of the Andaman and Nicobar island (A&N) territory, to come up.

- The project was the only one of three high-profile proposed tourism projects that did not get a clearance from an expert committee on coastal clearance in February.
- This was because the proposed Aves Island project was located 20 m away from the High Tide Line(HTL) and existing rules required such projects to be at least 50 m away.

### Sundarbans

- On January 30, the Indian Sundarban was accorded the status of 'Wetland of International Importance' under the Ramsar Convention.
- The Sundarbans comprises hundreds of islands and a network of rivers, tributaries and creeks in the delta of the Ganga and the Brahmaputra at the mouth of the Bay of Bengal in India and Bangladesh.
- The Indian Sundarban constitutes over 60% of the country's total mangrove forest area.
- It is the 27th Ramsar Site in India, and with an area of 4,23,000 hectares is now the largest protected wetland in the country.
- The Convention on Wetlands of International Importance, better known as the Ramsar Convention, is an international agreement promoting the conservation and wise use of wetlands.
- It is the only global treaty to focus on a single ecosystem.
- The convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975.
- Traditionally viewed as a wasteland or breeding ground of disease, wetlands actually provide freshwater and food, and serve as nature's shock absorber.
- Wetlands, critical for biodiversity, are disappearing rapidly, with recent estimates showing that 64% or more of the world's wetlands have vanished since 1900.
- The Indian Sundarban met four of the nine criteria required for the status of 'Wetland of International Importance' — presence of rare species and threatened ecological communities, biological diversity, significant and representative fish and fish spawning ground and migration path.
- The Indian Sundarban, also a UNESCO world heritage site, is home to the Royal Bengal Tiger.
- Indian Sundarban is also home to a large number of "rare and globally threatened species, such as the critically endangered northern river terrapin (Batagur baska), the

endangered Irrawaddy dolphin (*Orcaella brevirostris*), and the vulnerable fishing cat (*Prionailurus viverrinus*).

- Two of the world's four horseshoe crab species, and eight of India's 12 species of kingfisher are also found here.
- The part of the Sundarban delta, which lies in Bangladesh, was accorded the status of a Ramsar site in 1992.

### Wood Snake

- A species of wood snake that wasn't seen for 140 years has resurfaced in a survey conducted by scientists in the Meghamalai Wildlife Sanctuary.
- The species is endemic to the Meghamalai forests and the Periyar Tiger Reserve landscape.
- The snake is a 'point endemic' (found only in Meghamalai).

### UN Environment

- Thousands of delegates, business leaders and campaigners are in Nairobi for the five-day UN Environment Assembly, the top annual forum on the planet's environmental crisis.
- The UN wants individual countries to sign up to "significantly" reduce plastic production, including a phasing out of single-use plastics by 2030 — a goal inspired by the 2015 Paris Agreement on voluntary reductions of carbon emissions.
- In the field of plastic pollution we don't have such agreements. This is the first time UN Environment wants to convince member states to make international commitments.
- The world currently produces more than 300 million tonnes of plastics annually, and there are at least five trillion plastic pieces floating in our oceans.
- Microplastics have been found in the deepest sea trenches and high up the earth's tallest peaks.

### Cool-Spots

- Human impacts on species occur across 84% of the earth's surface.
- India ranks 16th in such human impacts, with 35 species impacted on average.
- Malaysia ranks first among the countries with the highest number of impacted species (125).
- Southeast Asian tropical forests — including those in India's Western Ghats, Himalayas and north-east — are among the 'hotspots' of threatened species.
- However, these areas are also 'cool-spots'.
- Cool-spots are the world's last refuges where high numbers of threatened species still persist.
- Cool-spots could be the result of protection or because of intact habitat.

### Astrobatrachus Kurichiyana

- A starry dwarf frog has been discovered in Kerala.
- It is a nocturnal amphibian that lives under leaf litter on a mountaintop in Kerala's Wayanad.
- It has been named the *Astrobatrachus kurichiyana*.
- It is not only a new species but different enough to be assigned to a new 'subfamily'.
- The species is at least 60 million years old.

### Global Environmental Outlook

- India could save at least \$3 trillion in healthcare costs if it implemented policy initiatives consistent with ensuring that the globe didn't heat up beyond 1.5 degrees Celsius by the turn of the century, says the sixth edition of the Global Environmental Outlook (GEO).
- Global Environmental Outlook (GEO) is prepared by the United Nations Environment Programme.
- India's stated commitment is to lower emissions intensity of its GDP by 33-35% compared to 2005 levels by 2030; increase total cumulative electricity generation

from fossil free energy sources to 40% by 2030, and create additional carbon sink of 2.5 to 3 billion tons through additional forest and tree cover.

- The Paris Agreement aims to keep global temperature rise to below 2 degrees Celsius above pre-industrial levels.

### Air Pollution-Diabetes

- Long-term exposure to harmful smog particles increases the risk of diabetes, a new study in China has shown, providing evidence for a link between the country's air pollution and the disease.
- China is facing the largest diabetes problem in the world with around 11% of its population suffering from the metabolic illness.

### Climate Vulnerability Index

- A climate vulnerability index for India on the anvil.
- The Department of Science and Technology (DST) will be commissioning a study to assess the climate risks faced by States in India.
- 'Vulnerability index' of States is prepared based on district-level data.
- Vulnerability would be a measure of the inherent risks a district faces, primarily by virtue of its geography and socio-economic situation.
- The scientists conducted workshops with the States and culled eight key parameters on the basis of which a vulnerability score could be generated. They included: percentage of area in districts under forests, yield variability of food grain, population density, female literacy rate, infant mortality rate, percentage of population below poverty line, average man-days under MGNREGA and the area under slope > 30%.
- On a scale ranging 0-1, 1 indicating the highest possible level of vulnerability, at the top of the scale were Assam with a score of 0.72 and Mizoram at 0.71.

### Air pollution

- The National Green Tribunal (NGT) has directed six States to submit by April 30 action plans for bringing air quality standards within the prescribed norms, failing which they would be liable to pay environment compensation of ₹1 crore each.

- The States, where action plans are found to be deficient and deficiencies are not removed till April 30, will be liable to pay ₹25 lakh each and the timeline for execution of the action plans is six months from the date of their finalisation.
- Concerned over the threat posed to limited natural resources due to their overuse, the tribunal has directed assessment of carrying capacity of 102 cities where the air quality does not meet the national ambient air quality standards.
- The concept of “carrying capacity” addresses the question as to how many people can be permitted into any area without the risk of degrading the environment there.

### Pollution

- An ambitious resolution piloted by India to phase out single-use plastics by 2025, was watered down at the United Nations Environment Assembly (UNEA) that concluded in Nairobi.
- Only a small proportion of the plastics produced globally are recycled, with most of it damaging the environment and aquatic bio-diversity.
- A Central Pollution Control Board estimate in 2015 says that Indian cities generate 15,000 tonnes of plastic waste daily and about 70% of the plastic produced in the country ends up as waste.
- Seventeen States have plastic bans, on paper.
- Experts have rued the inadequacy of collection and recycling systems to address the burgeoning plastic waste problem.
- Along with plastic, India also piloted a resolution on curbing nitrogen pollution.
- The global nitrogen-use efficiency is low, resulting in pollution by reactive nitrogen which threatens human health, ecosystem services, contributes to climate change and stratospheric ozone depletion.

### CO2

- The ocean’s uptake of anthropogenic CO2 during 1994-2007 showed clear regional deviations from the usual.
- The ocean absorbs nearly 30% of human emissions. This casts a doubt, whether we can depend on this effect for the future.



### Bumphead Parrotfish

- The survival of the threatened bumphead parrotfish in the Andaman and Nicobar Islands hinges on the persistence of coral reefs and presence of marine protected areas.
- Implementing fishing regulations could help its population bounce back.
- Bumpheads are the world's largest parrotfish.
- Ramming its enormous green head against corals to dislodge them, a single bumphead can nibble up to five tonnes of coral every year. Though seemingly destructive, this activity promotes coral growth and keeps reef ecosystems healthy.
- However, numbers of bumphead parrotfish have decreased worldwide. Overfishing is a concern.
- Bumpheads are not legally protected in India though the IUCN categorises them as Vulnerable.

### Gatimaan Express

- India's semi-high-speed train Gatimaan Express that runs between Delhi and Jhansi is now actively promoting elephant protection in partnership with Wildlife SOS.
- Seats on the train now carry the message "Joyrides on elephants is elephant abuse". Also, the breakfast trays carry a message about "responsible tourism".
- India is home to 50% of the world's Asian elephant population.

### Rising sea level

- The fragile water table in the coastal areas is under threat of severe seawater intrusion due to anticipated rise in sea levels in the next few decades.
- There is a rise in sea level by 2mm every year.
- The increasing sea level would also force the water table along the coastline to move upwards.
- It would slowly replace the freshwater at the bottom of the aquifer.
- The volume of fresh water would gradually reduce in the coastal areas.

**Bioacoustics**

- Bioacoustics is the study of animal sound production, dispersion and reception.
- It is being used worldwide to not only monitor threats to biodiversity but also study animal behaviour and diversity.
- The field of bioacoustics is still in its nascent stages in India.

**Carbon Dioxide Emissions**

- India emitted 2,299 million tonnes of carbon dioxide in 2018, a 4.8% rise from the previous year.
- India's emissions growth was higher than that of the United States and China — the two biggest emitters in the world — and this was primarily due to a rise in coal consumption.
- China, the United States, and India together accounted for nearly 70% of the rise in energy demand.
- India's per capita emissions were about 40% of the global average and contributed 7% to the global carbon dioxide burden.
- The U.S., the largest emitter, was responsible for 14%.
- As per its commitments to the United Nations Framework Convention on Climate Change, India has promised to reduce the emissions intensity of its economy by 2030, compared to the 2005 levels.
- It has also committed to having 40% of its energy from renewable sources by 2030 and, as part of this, install 100 GW of solar power by 2022.

**Single-Use Plastics**

- The European Union decided to ban plastic consumer items including plates, cutlery and straws as of 2021 to help clean up oceans.
- The prohibition on single-use plastics approved by the European Parliament in Strasbourg, France, also applies to beverage cups, food containers and cotton bud sticks.
- Plastics account for around 80 percent of marine litter.

**GEOGRAPHY****Palghar Earthquake**

- Palghar district in Maharashtra, which has seen thousands of small earthquakes since November 2018, experienced a quake measuring 4.3 on the moment magnitude (Mw) scale.
- This is the first time the magnitude has crossed 4 here, with tremors felt even in Mumbai.
- Scientists, however, are divided on the primary cause of this phenomenon. Some believe it is related to groundwater levels, and others attribute it to tectonic activity.
- If high groundwater is the cause, the quakes may remain small. This phenomenon, called hydro-seismicity, is common across the Deccan plateau.
- However, another hypothesis is that intra-plate tectonic forces could be generating stresses along faults in Palghar. Such a mechanism is believed to be behind the 1993 Latur earthquake.
- If intra-plate activity is the cause, Palghar could see larger, more destructive quakes.
- Till a while ago, seismologists believed the driver behind the Palghar activity was hydroseismicity. In this phenomenon, rainwater enters the existing faults in the earth's crust. This increases pressure, which is released through small earthquakes.
- Such earthquakes typically measure less than 4 Mw and subside by December. They are also very shallow, typically emerging from within 4-5 km underground. In contrast, the Palghar quakes have continued into February, indicating that tectonic activity is at play. Also, a few of the temblors originated from 15 km underground, deeper than most hydroseismic quakes.

**Bamboo Fossils**

- Northeast India, a bamboo hotspot, has thrown up several bamboo fossils.
- One of them at around 28 million years old, is the oldest Asian bamboo fossil ever unearthed.
- The earliest bamboos in Asia probably originated in eastern Gondwana, which comprises India too.

- Ancient bamboos probably evolved during a warm and humid period, he adds. However, they seem to have adapted over the years and modern bamboos are found in both warm and cold climates now.

### Kiru Hydro Electric Project

- The project is located on River Chenab in Kishtwar district of Jammu & Kashmir.
- It envisages construction of a 135 m high concrete gravity Dam.
- It is envisaged as a Run of River (RoR) Scheme.

### Aravali

- The Supreme Court cautioned the Haryana government against doing “anything” to harm the ecologically fragile Aravali range.
- The Aravalli Range is a range of mountains running approximately 692 km in a southwest direction, starting in North India from Delhi and passing through southern Haryana, through to Western India across the states of Rajasthan and ending in Gujarat.

### California

- California is experiencing its second super bloom in two years as a wave of rain-fed bright purple, yellow, and orange wild flowers pops up across its deserts.
- The occurrence happens only when rain and warm temperatures set conditions for mass concentrations of wild flowers.

### Heat Waves

- A study of urban areas in India has found that though there is an absolute increase in temperature during heat waves in both urban and non-urban areas, the urban areas are relatively cooler than the surrounding non-urban areas.
- At 1.94°C, the absolute increase in temperature during the day in non-urban areas during a heat wave was significantly higher than in urban areas (0.14°C)

- At 44.5°C, the non-urban areas were warmer than urban areas (43.7°C). However, during the night, all urban areas were hotter than the surrounding non-urban areas.
- The urban areas witness less temperature increase during heat waves compared with non-urban areas due to significantly higher tree cover and more number of water bodies. In contrast, a majority of non-urban areas are located in agriculture-dominated regions.
- In non-urban areas, the vegetation cover in the form of crops and soil moisture from cropland irrigation decline sharply after crops are harvested and well before the onset of heat waves during summer. The urban areas, on the other hand, have perennial vegetation in the form of tree cover and lawns, and more number of water bodies, which help in keeping the urban areas relatively cooler than non-urban areas.

### Meghalaya Rocks

- Rocks in Meghalaya cave connect Northeast monsoon to El Niño.
- India's summer monsoon, in the months of June, July, August and September, which brings in about 70% of annual rainfall in the country, is already known to be heavily influenced by the variability in sea-surface temperatures of Pacific Ocean. student Elli Ronay studies a stalagmite in Mawmluh Cave. Jessica Oster/Vanderbilt University
- A study on the rock formations in Meghalaya has found the evidence that India's winter rainfall could be influenced by the state of the ocean waters in the faraway Pacific.
- India's summer monsoon is already known to be heavily influenced by the El Niño Southern Oscillation (ENSO). This relationship is not so strongly established with the winter monsoon, also called as the northeastern monsoon.
- The latest study has found new evidence to suggest that the state of Pacific Ocean do indeed impact the winter rains.
- It says the "unexpected connection" between winter rainfall amounts in northeast India and climatic conditions in the Pacific Ocean, could help in predicting the rainfall during the winter months.
- The findings are based on research on stalagmites (mineral deposits, mainly limestone, in caves) of the Mawmluh Cave, near Cherrapunji.
- These solid stalagmite structures, or mineral deposits, are the result of slow but steady water dripping in the caves, and contain several thin layers of different kinds of minerals that get picked up while the water is flowing.

### Geographical Indication

- Five varieties of Indian coffee have been awarded the Geographical Indication (GI) tag, a move that will enhance their visibility globally and allow growers to get the right value.
- While Coorg Arabica coffee is grown specifically in Kodagu district of Karnataka, Wayanaad Robusta coffee is from Wayanad district in Kerala, Chikmagalur Arabica coffee from Chikmagalur district in the Deccan plateau of Karnataka, Araku Valley Arabica coffee from the hilly tracks of Visakhapatnam district in Andhra Pradesh and Odisha region, and Baba Budangiri Arabica coffee from the central portion of Chikmagalur district.
- The Monsooned Malabar Robusta Coffee, a unique coffee from India, was given the GI certification earlier.
- India is the only country where the entire coffee cultivation is grown under shade, hand-picked and sun-dried.

### INFRASTRUCTURE

#### Rajdhani Express

- The country's first Rajdhani Express, which revolutionised Indian Railways by way of speed and luxury in the 1960s, turned 50.
- The Kolkata-New Delhi Rajdhani Express embarked on its first journey on March 3, 1969.
- It was the first train with meals included in the fares.

#### Lighthouse Project

- Six cities across the country have been selected as "live laboratories" for a pilot project under which 1,000 houses will be built using innovative technologies that are low-cost, sustainable and disaster-resistant.
- Six cities have been identified to serve as live laboratories for the Lighthouse Project. These are Rajkot (Gujarat), Ranchi (Jharkhand), Indore (Madhya Pradesh), Chennai (Tamil Nadu), Agartala (Tripura) and Lucknow (Uttar Pradesh).
- The Vulnerability Atlas of India is a collation of the existing hazard scenario of the entire country.
- 'April 2019-March 2020' has been declared as Construction-Technology year and stress has been put on the use of advanced technology to meet the increasing demand for housing in the country caused by rapid urbanisation.

**INTERNATIONAL**

**Bilateral Swap Arrangement**

- Agreement for Bilateral Swap Arrangement (BSA) has been signed between India and Japan.
- This BSA provides for India to access 75 billion in US dollars whereas the earlier BSA had provided for US \$50 billion.
- India can access the agreed amount of USD 75 billion for its domestic currency, for the purpose of maintaining an appropriate level of balance of payments or short-term liquidity.
- A part of the BSA can be accessed at the discretion of India.
- The BSA provides India flexibility to use foreign exchange reserves if at any point of time there is need to use the resources available under BSA.

**RCEP**

- The 16 members of the RCEP group, including India and China agreed to intensify ongoing negotiations for a proposed mega trade agreement to resolve all issues and conclude the talks this year.
- Members of the Regional Comprehensive Economic Partnership want India to eliminate or reduce customs duties on maximum number of goods it trades with them.
- But, lower level of ambitions in services and investments, a key area of interest for India, does not augur well for the pact that seeks to be comprehensive.

**OIC**

- Organisation of Islamic Cooperation (OIC) is an international organization founded in 1969.
- It consists of 57 member states with 40 countries being Muslim Majority countries.
- The organisation states that it is "the collective voice of the Muslim world" and works to "safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony".
- The OIC has permanent delegations to the United Nations and the European Union.



- The official languages of the OIC are Arabic, English, and French.

### Stronger Towns Fund

- The British government has set up a £1.6 billion fund in response to the underlying challenges of the country.
- The “Stronger Towns Fund” is meant to target areas that had not “shared in the proceeds of growth in the same way as prosperous parts of the country”.
- The funds would help job-boosting projects in these areas.

### Generalized System of Preferences

- U.S. has announced that he intends to end preferential trade terms for India under the Generalized System of Preferences (GSP) programme.
- The GSP programme sets zero tariffs for certain goods from a set of 121 developing countries to foster their trade and economic development.
- GSP accounts for some \$5.6 billion of India’s exports to the U.S.making India the largest GSP beneficiary.
- Chemicals, gems and jewellery, engineering and textiles are among the Indian industrial sectors that benefit from the GSP.

### Generalized System of Preferences

- The Generalized System of Preferences is the largest and oldest United States trade preference programme.
- The U.S. intended it to promote economic development by eliminating duties on some products it imports from the 120 countries designated as beneficiaries.
- It was established by the Trade Act of 1974.
- GSP helps spur sustainable development in beneficiary countries by helping them increase and diversify their trade with the U.S.
- The other benefit is that GSP boosts American competitiveness by reducing the costs of imported inputs used by U.S. companies to manufacture goods in the United States.

- The Indian export industry may not feel the pinch of the GSP removal for India by the U.S. The loss for the industry amounts to about \$190 million on exports of \$5.6 billion falling under the GSP category. But specific sectors, such as gem and jewellery, leather and processed foods will lose the benefits of the programme.

### Arms Import

- India was the world's second largest arms importer from 2014-18 and accounted for 9.5% of the global total.
- Saudi Arabia is the largest importer which accounted for 12% of the total imports during the period.
- However, Indian imports decreased by 24% between 2009-13 and 2014-18.
- Russia accounted for 58% of Indian arms imports in 2014–18, compared with 76% in 2009-13.
- Israel, the U.S. and France all increased their arms exports to India in 2014-18.



SOURCE: SIPRI ARMS TRANSFER DATABASE

### Influenza

- The World Health Organization launched a strategy to protect people worldwide over the next decade against the threat of influenza.
- Influenza epidemics, largely seasonal, affect around one billion people and kill hundreds of thousands annually.
- WHO's new strategy, for 2019 through 2030, aims to prevent seasonal influenza, control the virus's spread from animals to humans and prepare for the next pandemic.

### FATF

- The Financial Action Task Force (FATF) is an inter-governmental body established in 1989.
- The objectives of the FATF are to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.
- The FATF is therefore a "policy-making body" which works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.
- The FATF's decision making body, the FATF Plenary, meets three times per year.

### TIR Convention

- The first shipment under the United Nations 'Transports Internationaux Routiers' (TIR) convention arrived in India from Afghanistan through Iran's Chabahar Port.
- The consignments arrived at port of Nhava Sheva, Mumbai.
- TIR convention will help in fast and easy movement of goods across multiple countries under a common customs document and guarantee.
- India had joined the TIR Convention (the United Nations Customs Convention on International Transport of Goods under cover of TIR Carnets) in 2017.
- The convention allows goods to be outlined in a TIR carnet and sealed in load compartments.

- Customs officials verify the carnet and check the seals, with no need for physical checking of the contents, enabling shipments to pass through countries without being opened at borders.
- Reciprocal recognition of customs controls is at the heart of the Convention. This enables a facilitative and non-intrusive environment for multi-modal transport of goods through several countries.
- TIR will play a pivotal role in improving ease of doing business and pave the way for smoother and safer transport of goods across international borders and will help boost trade between India, Central Asia, Europe and Russia
- It will act as a strong catalyst for moving goods using the multi-modal transportation route like Chabahar and International North-South Transport (INSTC) Corridor.

### Mercer's Index

- The Austrian capital Vienna has topped Mercer's index of most liveable cities for the 10th year in a row.
- Baghdad was ranked last.

### China's 'hold' on Azhar

- China decided to place a "hold" on the UN Security Council listing of Jaish-e-Mohammad chief Masood Azhar.
- China's hold does not automatically kill the current proposal to list Azhar.
- China can maintain the hold for up to six months according to the guidelines of the 1267 ISIL and Al Qaeda Sanctions Committee. After that, it can request one extension for up to three months.
- This means, if India chooses to pursue the issue, it could use the time to convince China of the importance of the move.

### Afghanistan

- The Indian Institute of Technology - Madras, will assist Afghanistan's higher education department to set up its own online courses platform.

- The collaboration would allow the sharing of the Indian government's platform Study Webs of Active Learning for Young Aspiring Minds (SWAYAM), which offers free online courses, with Afghan students and academicians.
- The institute would also assist the educational institutions in Afghanistan to upload existing courses developed locally on the SWAYAM platform.
- Assistance would be given to the country to develop its own online courses platform.
- The agreement would allow Afghans to access the National Digital Library of India (NDLI), virtual labs and tutorials developed by the IITs.

### 'India first' policy

- Maldives reaffirmed its "India first" policy.
- India, in turn, expressed its full support to the Maldives in line with its "Neighbourhood First" policy.
- During her two-day visit, Ms. Swaraj inaugurated the renovated Indira Gandhi Memorial Hospital, built in 1995.

### Houthi

- Houthi rebels warned that they could launch attacks against Saudi Arabia and the United Arab Emirates, who lead a military coalition against them.
- Houthi rebels belong to Yemen.

### Mozambique

- The Indian Navy had launched a Humanitarian Assistance and Disaster Relief (HADR) operation in coordination with local officials to evacuate about 5,000 people stranded at Buzi near Port Beira in Mozambique.
- The African nation has been devastated by tropical cyclone Idai.

### Abel Prize

- The Abel Prize in mathematics was awarded to Karen Uhlenbeck of the U.S. for her work on partial differential equations.

- She is the first woman to win the award.
- The prize is named after the 19th century Norwegian mathematician Niels Henrik Abel.

### World Happiness Report

- Indians are not as happy in 2019 as they were in 2018 and the country figures at 140th place, seven spots down from last year's 133, on UN World Happiness Report-2019.
- The list is topped by Finland for the second year in a row.
- The report was released on March 20, which has been designated as the World Happiness Day by the UN General Assembly.
- According to the report, the overall world happiness has fallen over the past few years, which has mostly been fuelled by a sustained drop in India, which came in 140th place this year.
- The UN's annual World Happiness Report ranks the world's 156 countries on "how happy their citizens perceive themselves to be".
- Pakistan is ranked 67th, Bangladesh 125th and China is placed at 93rd position.
- People in war-torn South Sudan are the most unhappy with their lives.

### Golan Heights

- US announced that it should recognise Israeli sovereignty over the Golan Heights.
- Golan Heights is an area seized from Syria and annexed in a move never recognised by the international community.
- Israel occupied the Golan Heights, West Bank, East Jerusalem and the Gaza Strip in the 1967 Six-Day War. It later annexed the Golan Heights and East Jerusalem in moves never recognised by the most countries.

### AFINDEX

- AFINDEX-19 is the inaugural Africa-India Field Training Exercise.
- 18 nations are participating in this exercise.

- The activities includes demonstrations and training on establishing & functioning of Mine Action Center, identification and survey of contaminated areas, mechanical and manual demining, disposal of improvised explosives devices and air causality disposal.
- The exercise is focusing on exchange of best practices amongst the participating nations, team building and tactical level operations in conduct of Humanitarian Mine Assistance and Peace Keeping operations based on the guidelines issued by the United Nations.

### Italy

- Italy signed a “non-binding” protocol with China to take part in Beijing’s new “Silk Road” of transport and trade links stretching from Asia to Europe.
- In doing so, Italy became the first G7 country to sign up for the massive project.

### Scotty

- The Tyrannosaurus rex - discovered in Canada in 1991 is the world’s biggest.
- Nicknamed ‘Scotty’, the T. rex was 13 metres long and probably weighed more than 8,800 kg, making it bigger than all other carnivorous dinosaurs.

### Nur-Sultan

Kazakhstan renamed its capital Astana as Nur-Sultan.

### Note Verbale – Diplomatic Note

- India has raised with Pakistan the alleged abduction of two minor Hindu girls in that country and their alleged conversion to Islam.
- The government raised the matter through a note verbale sent to the Pakistan Foreign Ministry.

- A note verbale is a diplomatic communication from one government to another, delivered through each other's diplomatic representatives.
- Like many other diplomatic terms, note verbale is French, and literally means a verbal note, because it was meant to be delivered orally to the recipient.
- In modern times, it is a written note.
- A note verbale is written on the sending entity's letterhead, and stamped with that entity's seal, but not signed. It is written in the third person.
- Note verbale are the commonest method of formal diplomatic communication. They are used to convey information or requests of all kinds.

### APG

- The Asia/Pacific Group on Money Laundering (also known as the APG) is the FATF-style regional body for the Asia-Pacific region.
- It is an inter-governmental (international) organisation founded in 1997 in Bangkok, Thailand.
- The APG consists of 41 member jurisdictions and a number of observer jurisdictions and international/regional observer organisations.
- The APG has two Co-Chairs: one permanent and one two-year term rotating Co-Chair. The permanent Co-Chair is Australia.

### BEPS project

- India and the U.S. signed an inter-government agreement for the automatic exchange of country-by-country (CbC) reports.
- This agreement will reduce the compliance burden for Indian subsidiary companies of U.S. parent companies.
- This is a key step in making India compliant with the Base Erosion and Profit Shifting (BEPS) project, of which it is an active participant.
- The Base Erosion and Profit Shifting (BEPS) Action Plan was adopted by the Organisation for Economic Co-operation and Development (OECD) and G20 countries in 2013.
- It recognised that the way forward to mitigate risk from base erosion and profit shifting was to enhance transparency.



- Against this background, a template was released in 2014, which outlined how MNEs could report the required information for each tax jurisdiction in which they do business. These are called the country-by-country reports.
- Base erosion and profit shifting refers to the activities of multinational corporations to shift their profits from high tax jurisdictions to lower tax jurisdiction, thereby eroding the tax base of the high tax jurisdictions and depriving them of tax revenue.
- In order to combat this, many countries entered into agreements to share tax information with each other to enhance transparency and make such profit shifting that much harder.

### Malham

- Israeli researchers have discovered the world's longest salt cave.
- It is a 10-km long warren of underground passages and chambers in Mount Sodom, overlooking the Dead Sea.
- The cave is called Malham.

### WTO

- Thailand has expressed its interest to join the consultations sought by Guatemala under the aegis of the World Trade Organization's (WTO) dispute settlement mechanism against India's sugar subsidies.
- On March 25, after Brazil and Australia, Guatemala dragged India to the WTO alleging that New Delhi's sugar subsidies to farmers are inconsistent with global trade rules.
- Thailand has substantial trade interest in these consultations, it said, adding that in 2018 it was the world's second largest exporter of sugar.
- Seeking consultation is the first step of dispute settlement process. If the two nations are not able to reach a mutually agreed solution through consultation, India may request for a WTO dispute settlement panel to review the matter.
- Guatemala has sought consultations with India under the rules and procedures governing the settlement of disputes of the Geneva-based 164-member WTO.
- It has said that India maintains various domestic support measures in favour of sugarcane and sugar producers, such as a system of administered prices for sugar cane.

### POLITY

#### Aadhaar

- Government approved the promulgation of an Ordinance to allow voluntary submission of Aadhaar as identity proof for use by private entities such as banks, telcos and fintech firms.
- The Ordinance also gives a child an option to exit from Aadhaar on attaining 18 years of age.
- It also provides for civil penalties for violations of the Aadhaar Act.
- Further, it provides for an alternate virtual identity to conceal the actual Aadhaar number.

#### Election Commission

- Those not having their Electors Photo Identity Cards can now show any of the 11 alternative documents, including Aadhaar card, for exercising their franchise.
- Henceforth, photo voter slip will not be accepted as a standalone identification paper.
- If an elector produces a card issued by the Electoral Registration Officer of another Assembly constituency, such card will be accepted.

#### J&K ordinance

- The Union Cabinet approved the Jammu and Kashmir Reservation (Amendment) Ordinance, 2019.
- It will pave the way to extend reservation in jobs, promotions and education to people living 10 km from the International Border (IB) in Jammu.
- Earlier the benefits were only reserved for people living 10 km beyond the Line of Control (LoC) and affected by shelling and firing from across the border.
- The ordinance in no way affected the rights of people of the State nor did it tinker with Article 35-A.

- Article 35-A provides special rights and privileges to permanent residents of J&K.
- The 740 km LoC in J&K is under the operational control of the Army and 192 km IB in Jammu is manned by the BSF.
- Since the State was under President's rule, the ordinance had to be cleared by the Centre.

### National Security Council

- The National Security Council is an executive government agency tasked with advising the Prime Minister's Office on matters of national security and strategic interest.
- It was established by the Atal Bihari Vajpayee government in 1998.
- Prior to the formation of the NSC, these activities were overseen by the Principal Secretary to the Prime Minister.

### Rajasthan

- Rajasthan has amended the Lokayukta Act to reduce the Lokayukta's tenure from eight years to five years.
- The decision has led to an abrupt end of the term of the present Lokayukta.

### Official Secrets Act

- An 'Official Secrets Act' is a generic term that is used to refer to a law — originally invented by the British, and then exported across the Commonwealth — that is designed to keep certain kinds of information confidential, including, but not always limited to, information involving the affairs of state, diplomacy, national security, espionage and other state secrets.
- India's Official Secrets Act (OSA) dates back to 1923. It includes penalties for spying. Additionally, however, it punishes the communication of any information obtained in contravention of the Act, which could prejudice the security of the state, or friendly relations with foreign states.
- Furthermore, it punished people who knowingly receive such information — a provision clearly designed to capture investigative journalism.

- The primary critique of the Act is that it flips the constitutive logic of a democratic republic, where the state is supposed to be transparent to its citizens.
- The scope of the OSA has been somewhat diluted, thanks to the Right to Information Act. Section 22 of the RTI Act expressly says it overrides the OSA. In other words, it is not open to the government to deny access to a document demanded through an RTI question, on the basis that it has been marked secret under the OSA. Rather, the government will have to justify its decision to withhold information under the arguably narrower exception clauses of the RTI Act itself.

### Electoral Bonds

- Electoral bonds have been introduced to promote transparency in funding and donation received by political parties.
- The bonds can be encashed by an eligible political party only through their accounts with authorised banks.
- The bonds do not have the name of the donor or the receiving political party and only carry unique hidden alphanumeric serial numbers as an in-built security feature.
- The electoral bond can be bought for any value and has a life of only 15 days.
- Bonds will be available for purchase only for 10 days in designated months.

### Observer App

- The Election Commission has for the first time started using a mobile application that will help poll observers to submit reports.
- The officials deployed for elections will get all the important notifications and alerts through the 'Observer App'.
- It will also help them get their deployment status and download the ID card.
- As the observers will be involved in real-time disposal of cases of violation of the Model Code of Conduct and expenditure received through another mobile application 'cVIGIL', those details will also be available on the 'Observer'.

### Finance Bill

- The Centre told the Supreme Court that Finance Bill of 2017 was certified as a Money Bill by the Speaker of the Lok Sabha and judicial review of that decision cannot be done.
- The government said the court cannot question the speaker's decision of certifying a bill as a Money Bill and it is a well settled law.
- The centre argued that the certification of a particular Act as a Money Bill is an internal function of the Parliament. If there is any dispute, the Speaker can apply his mind and takes a decision. No one can question the bonafide of the Speaker and all members abide by the decision.
- The centre held that the certification of Money Bill is for the whole Finance Bill and saying that a part of the Bill does not qualify for the Money Bill cannot be held to be correct.

### SCIENCE & TECH

#### Software Product Policy

- The Union Cabinet approved the National Policy on Software Products 2019.
- The policy aims to help the industry grow at CAGR of 40% to reach \$70-80 billion by 2025, while creating employment opportunities for 3.5 million people.
- It aims to adopt a shift in strategy so that IT products also contribute equitably and significantly to the industry along with IT services.
- It proposes to create a ₹5,000-crore fund with industry participation to promote emerging technology such as Internet of Things, Artificial Intelligence, Blockchain, Big Data and robotics. Of this, government contribution will be ₹1,000 crore.
- It aims to nurture 10,000 technology start-ups in software product industry, including 1,000 such start-ups in tier-II and tier-III towns.
- It also proposes up-skilling of 10 lakh IT professionals as well specialise 10,000 professionals to “provide leadership.”

#### Ripley

- SpaceX celebrated the successful launch of a new astronaut capsule on a week-long round trip to the International Space Station.
- This time around, the only occupant on board SpaceX’s Crew Dragon capsule was a dummy named Ripley.
- The mission aims to test the vessel’s reliability and safety in real-life conditions.
- Ripley is fitted with monitors to test the forces that future astronauts will be subjected to on takeoff and when they return to the Earth’s atmosphere and then land in the Atlantic, braked by giant parachutes.

#### Young Scientist Programme

- Indian Space Research Organisation has launched a special programme for School Children called “**Young Scientist Programme**” “**YUva Vigyani KAryakram**” (युविका) from this year.

- The Program is primarily aimed at imparting basic knowledge on Space Technology, Space Science and Space Applications to the younger ones with the intent of arousing their interest in the emerging areas of Space activities.
- The residential training programme will be of around two weeks duration during summer holidays and it is proposed to select 3 students each from each State/ Union Territory to participate in this programme every year covering CBSE, ICSE and State syllabus.
- Those who have finished 8th standard and currently studying in 9th standard will be eligible for the programme.

### ISRO

- ISRO and its French counterpart CNES sealed an agreement to set up a joint maritime surveillance system in the country.
- The two nations will explore putting up a constellation of low-Earth orbiting satellites that will identify and track movement of ships globally – and in particular those moving in the Indian Ocean region where France has its Reunion Islands.
- The two agencies have put up two climate and ocean weather monitoring satellites Megha-Tropiques (of 2011) and SARAL-AliKa (2013) that are considered a model. This fleet will be augmented with the launch of Oceansat-3-Argos mission in 2020 along with a joint infrared Earth-observation satellite.

### Bolo

- Google launched a mobile application named 'Bolo' (speak) to help schoolchildren improve their Hindi and English reading skills.
- The beta version of the free application — launched first in India, uses Google's speech recognition and text-to-speech technology.


### Belle II

- Belle II, a particle accelerator experiment located in Tsukuba, Japan, is a unique facility in the world.
- Here, electrons and positrons (anti-electrons) collide to produce B mesons in order to study the breakdown of symmetry in these decays.

- As an international collaboration involving 26 countries, Belle II has an Indian link -- a team led by physicists and engineers from the Tata Institute of Fundamental Research, Mumbai, have built the fourth layer of the vertex detector.
- The focus at Belle II is on B-mesons — particles that contain the B-quark, also known as the beauty or bottom quark.

### Cloud seeding

- The Karnataka government is hoping to influence the upcoming monsoon and capture as much water as possible from the rain clouds by cloud seeding.
- Cloud seeding uses planes to spray clouds with chemicals to condense smaller particles into larger rain droplets.



**Seeding the clouds**

**How it works**

- Doppler radars (three for State) to keep an eye on cloud movements
- Monitoring/advisory committee identifies suitable cloud formation over areas where there is soil moisture stress or low catchment rains
- Specialised planes spray sodium chloride, potassium chloride and silver iodide
- These condense small moisture particles into larger rain droplets
- Enhancement of rain is captured by 6,000 rain gauges

**Project Varshadhare**

**Period:** August 21 to November 7, 2017

**Cost:** ₹35 crore

**Contracted flying hours:** 300 hours in 60 days

**Flying hours:** 286.51 hours in 37 days

**Impact:** 27.9% enhanced rainfall and 2.5 tmcft of water into Linganamakki reservoir

**Previous exercises:** 2003, 2009, 2017

**Tenders called for:** 2019 and 2020

**Cost:** ₹50 crore (estimated) each year

**Days for cloud seeding:** 90 days each monsoon

### West Nile virus

- Recently a 7-year-old boy from Kerala was found to be infected by the West Nile virus (WNV).
- West Nile Virus is a mosquito-borne disease.
- It is mostly reported in continental United States.



- WNV can cause neurological disease and death in humans.
- The virus is commonly found in Africa, Europe, the Middle East, North America and West Asia. Humans, horses and other mammals can be infected.
- Vaccines are available for use in horses but not yet for humans.

### Herpes virus

- Space travel caused herpes viruses to reactivate in more than half of crew aboard Space Shuttle and International Space Station.
- It could present a significant health risk to astronauts on future missions to Mars and beyond.

### West Nile Fever

- A six-year-old boy died in Kerala from the West Nile fever.
- West Nile fever is a relatively unknown viral infection that leads to neurological diseases.
- Birds are the natural hosts of the virus and vaccine is not available for it.
- This viral infection is most often the result of mosquito bites.
- Mosquitoes are infected when they feed on birds, which circulate the virus.
- It may also be transmitted through contact with other infected animals, their blood, or other tissues.
- Symptoms of the virus infection include cold, fever, fatigue and nausea.

### Hayabusa 2

- Japan's space agency said that its Hayabusa2 spacecraft will drop an explosive on an asteroid to make a crater and then collect underground samples for possible clues to the origin of the solar system.

- Hayabusa2 will drop an impactor of the size of a baseball weighing 2 kg on the asteroid, named Ryugu, on April 5 to collect samples from deeper underground that have not been exposed to the sun or space rays.
- The mission will require the spacecraft to move quickly to the other side of the asteroid so it won't get hit by flying shards from the blast.
- While moving away, Hayabusa2 will leave a camera to capture the outcome. Scientists will then analyse details of the crater to determine the history of the asteroid.

### Dry Eye Disease

- For the first time, a study in India has found the incidence of dry eye disease to affect large chunk of the population.
- The incidence in urban areas was higher than in rural areas. The prevalence of dry eye disease will be about 40% of the urban population by 2030.
- Since the disease tends to be progressive with age, once corneal damage becomes irreversible it can lead to visual impairment and even blindness.. The onset of dry eye disease is early in men than in women.
- In men, the age of disease onset is early 20s and 30s compared with 50s and 60s in women.
- Hormonal imbalance could be a likely reason for higher cases in women in their 50s and 60s.
- Low tear production Age, urban residence, occupation and socio-economic affluence were found to be high risk factors for developing the disease.
- Dry eye disease could occur due to inadequate tear production (aqueous deficient), tear film instability due to evaporation or mixed type.

### Chitosan

- Chitosan, a kind of polysaccharide obtained from a chitin shell such as the shrimp's, is a natural biopolymer.
- It is water-soluble.

- It has been chemically modified by researchers to selectively remove either an oil or water phase from an oil-water mixture.

### Solar Tsunami

- It is believed that the “solar dynamo” — a naturally occurring generator which produces electric and magnetic fields in the sun — is linked to the production of sunspots.
- What kick-starts the 11-year sunspot cycle is not known.
- Now, a group of solar physicists suggests that a “solar tsunami” is at work that triggers the new sunspot cycle, after the old one ends.
- The extreme temperature and pressure conditions that prevail some 20,000 km below the sun’s surface cause its material to form a plasma consisting primarily of hydrogen and helium in a highly ionised state. The plasma is confined with huge magnetic fields inside the sun.
- These magnetic fields behave like rubber bands on a polished sphere. They tend to slip towards the poles. Holding these fields in their place requires that there is extra mass (plasma mass) pushing at the bands from higher latitudes. Thus, a magnetic dam is formed which is storing a big mass of plasma.
- At the end of a solar cycle, this magnetic dam can break, releasing huge amounts of plasma cascading like a tsunami towards the poles. These tsunami waves travel at high speeds of about 1,000 km per hour carrying excess plasma to the mid-latitudes. There they give rise to magnetic flux eruptions. These are seen as the bright patches that signal the start of the next cycle of sunspots.

### West Nile Virus

The West Nile Virus is a disease which spreads from birds to humans through the bite of an infected Culex mosquito.

### GRAPES-3

- For the first time in the world, researchers at the GRAPES-3 muon telescope facility in Ooty have measured the electrical potential, size and height of a thundercloud that passed overhead.
- Clouds have negative charges along their lower side and positive charges on top and can be several kilometres thick.

- Thunderstorms had an effect on muon intensity.
- Muons are produced when cosmic rays bombard air particles surrounding the earth. The muons produced can have positive or negative charge.
- When a positively charged muon falls through a cloud, it loses energy. If its energy falls below 1 giga electron volt (GeV), which is the threshold of detection of the GRAPES-3 muon telescope, it goes undetected.
- On the contrary, a negatively charged muon gains energy when falling through the cloud and gets detected. Since there are more positive than negative muons produced in nature, the two effects don't cancel out, and a net change in intensity is detected.

### Jupiter

- Gas giants are usually close to their stars.
- Researchers find that Jupiter formed at a distance some four times away from the sun as its present orbit.
- Over 7,00,000 years it migrated inwards in the solar system.
- At first, Jupiter was no larger than the earth.

### PSLV-C45

- PSLV-C45/Emisat mission scheduled for an April 1 lift-off from Sriharikota will be a memorable one for the ISRO.
- For one, it will be ISRO's first attempt at placing payloads in three different orbits.
- The chief payload — the 436 kg Emisat — will be injected into a 749 km orbit.
- After that, the fourth stage of the rocket will be manoeuvred to a 504 km orbit for releasing 28 international satellites. Once that job is over, the fourth stage will be restarted and guided to an altitude of 485 km. For the next six months, this stage will serve as an orbital platform for space-based experiments. This is another first for the ISRO. Normally, the spent stage simply becomes space junk.
- For the first time, ISRO will be employing four XL strap-on motors on the first stage.

### HINI

- In a matter of three weeks, the number of influenza A (H1N1) cases and deaths in India has risen sharply.
- Rajasthan continues to report the most number of cases and deaths, followed by Gujarat.
- Delhi has the third most number of cases.

### Imported Embryo

- In medical terms, the unborn offspring is an embryo from the day of fertilisation until the eighth week of pregnancy; after that, it is a foetus.
- Following in vitro fertilisation (outside the body), some couples choose to freeze embryos that are left over. This would allow patients to conceive at a later time.
- Embryos are frozen from the second day of fertilisation, using techniques to halt physiological or biological development.
- The embryo is stored in liquid nitrogen or nitrogen vapour at a temperature below -190°C.
- One possible reason for importing embryos could be to meet demands from Indian couples for a baby with “non-Indian looks”.
- It is also possible that embryos are imported for commissioning illegal surrogacy in India.
- In India, the Surrogacy (Regulation) Bill, 2016, passed by Lok Sabha in 2018, bans commercial surrogacy but permits altruistic surrogacy.
- then, the Indian Council of Medical Research (ICMR) has stopped giving no-objection-certificates for import of embryos or gametes.

### Turing Award

- Recently, three pioneers in artificial intelligence — a senior Google executive, Facebook’s chief AI scientist, and an academic — were announced as the winners for this year’s A M Turing Award.
- It is often described as the “Nobel Prize for computing”.

- It is for major contributions of lasting importance to computing.
- First awarded in 1966, it has been awarded annually for 53 years so far to 70 recipients. These include 3 women, the first of these having won in 2006.
- This year's winners worked on neural networks, a component of robotic systems that are automating a wide range of human activity, such as driving. These deep neural networks are good at speech and image recognition.

### Washing Machine for Space

- The days of astronauts packing enough clean clothes to last a whole mission could soon be over as Russia is developing a washing machine for space.
- Currently, astronauts — who live on the International Space Station (ISS) for stints of some six months — cannot wash their clothes in any way and simply put on new outfits when their clothes get dirty.
- Astronauts usually wear the same outfit for three to four days and then throw them away with other rubbish.
- For three crew members, up to 660 kg of clothes have to be ferried to the ISS over a year. For a two-year flight to Mars with six crew members this could increase to three tonnes.
- Researchers proposed using not water, which would be wasteful and require extra storage, but carbon dioxide that is produced by humans' breathing and can be turned into a liquid under pressure.

**SOCIAL SECTOR****PM-SYM**

- Prime Minister launched the Pradhan Mantri Shram Yogi Mandhan (PM-SYM) Yojana.
- It provides for a monthly pension of ₹3,000 to employees in the unorganised sector after 60 years of age.

**ICDS**

- Anganwadi services have a poor reach among key beneficiaries – the poorest of the poor and uneducated mothers – according to a paper published in a WHO bulletin recently.
- The government's Integrated Child Development Scheme (ICDS) provides a package of six services at anganwadi or child-care centres to young children and pregnant women and lactating mothers.
- These services include supplementary nutrition, referral services, immunisation, health check-up, pre-school non-formal education and health and nutrition education.

**Coins for Blind**

- Prime Minister released a new series of coins meant for the visually challenged coins.
- The ₹1, ₹2, ₹5, ₹10 and ₹20 coins increase in size and weight from lower to higher denominations.
- The ₹20 coin will be 12-sided with no serrations.
- The rest of the denominations are round in shape.

**National Health Authority**

- The first meeting of the governing body of the newly constituted National Health Authority (NHA) is to take place today.

- NHA IS tasked with the implementation of the Pradhan Mantri Jan Arogya Yojana (PMJAY).
- The governing board of the NHA is chaired by the Minister for Health and Family Welfare and has among its members the CEO of Niti Aayog, Expenditure Secretary, the CEO of NHA, Health Secretary, domain experts and five principal secretaries (Health) of different State governments.

### TB

- Of the 10 million new tuberculosis (TB) cases reported globally in 2017 by the World Health Organisation, 2.74 million were from India, showing a marginal reduction from 2.79 million in 2016.
- Despite TB incidence in the country being 204 cases per 1,00,000 in 2017, the government has set a highly ambitious target of “eliminating TB by 2025”, five years ahead of the Sustainable Development Goals (SDGs) target.

### Dhangars

- The Maharashtra government has decided to extend all the social welfare schemes availed by the Scheduled Tribe (ST) community to the Dhangar community as well.
- The Dhangar is a shepherd community in Maharashtra.

### Meiteis

Manipur is to include Meiteis, a non-tribal indigenous community, in the Scheduled Tribes list.



### MISCELLANEOUS

#### Nari Shakti Puraskar , 2018

- Nari Shakti Puraskar is the highest civilian honour for women in India.
- To acknowledge women's achievements, the Ministry of Women and Child Development confers Nari Shakti Puraskar on women and institutions in recognition of their relentless service towards the cause of women empowerment and social welfare.
- This year, 44 awardees have been selected for these Puraskar.
- This year, the Nari Shakti Puraskar has also been awarded to a One Stop Centre (OSC) and to a state which has shown exceptional progress in improving child sex ratio at birth under the Beti Bachao Beti Padhao scheme.

#### F103

- F103 is a Royal Bengal tigress, F103.
- It strayed out of north-central Assam's Orang National Park.