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ESE-2020
(Preliminary Examination)

Current Issues

(July - 2020)

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Agriculture Infrastructure Fund

- It is a new pan India Central Sector Scheme.
- The scheme shall provide a medium – long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets through interest subvention and financial support.
- The duration of the Scheme shall be from FY2020 to FY2029 (10 years).
- Under the scheme, Rs.One Lakh Crore will be provided by banks and financial institutions as loans to Primary Agricultural Credit Societies (PACS), Marketing Cooperative Societies, FPOs, SHGs, Farmers, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Startups etc.
- All loans under this financing facility will have interest subvention of 3% per annum up to a limit of Rs. 2 crore. This subvention will be available for a maximum period of seven years.
- Credit guarantee coverage will be available for eligible borrowers from this financing facility under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) scheme for a loan up to Rs. 2 crore.
- The fee for this coverage will be paid by the Government.
- It will be managed and monitored through an online Management Information System (MIS) platform.
- The National, State and District level Monitoring Committees will be set up to ensure real-time monitoring and effective feed-back.

U.S. withdrawal from WHO

- The U.S. officially notified the United Nations of its intention to withdraw membership from the World Health Organization on July 6th.
- This comes after President Donald Trump announced on May 29 his decision to halt funding and pull out of the global health body.
- Trump said the body had "called it wrong" on COVID-19 and that it was very "China centric" in its approach, suggesting that the WHO had gone along with Beijing's efforts months ago to under-represent the severity of the outbreak.
- The departure of the U.S. will be a significant blow to the WHO in terms of loss of technical expertise and an annual funding of about $450 million.
- The WHO now will have to suspend the country's voting rights and deny access to its services, as per Article 7 of its Constitution.

The United States is currently the WHO's biggest contributor, making up 14.67 per cent of total funding by providing $553.1 million.

The US is followed by the Bill & Melinda Gates Foundation forming 9.76 per cent or $367.7 million.

The third biggest contributor is the GAVI Vaccine Alliance at 8.39 per cent, with the UK (7.79 per cent) and Germany (5.68 per cent) coming fourth and fifth respectively. India makes up 0.48 per cent of total contributions.

Rewa solar project

- Inaugurated recently by Prime Minister Narendra Modi, it is Asia's largest 750 MW solar power project.
- It is located at Rewa in Madhya Pradesh.
- The Solar Park was developed by the Rewa Ultra Mega Solar Limited (RUMSL), a Joint Venture Company of Madhya Pradesh UrjaVikas Nigam Limited (MPUVN), and Solar Energy Corporation of India (SECI), a Central Public Sector Undertaking.
- The Rewa Project has been acknowledged in India and abroad for its robust project structuring and innovations.

SOLAR HOTSPOTS IN INDIA
Top 5 states in terms of capacity

State	Total capacity (in Mw)	Locations
Rajasthan	3,180	Bhadla, Jaisalmer, Jodhpur
Madhya Pradesh	2,750	Rewa, Neemuch, Agar, Mandsaur, Shajapur, Rajgarh, Chhatarpur, Morena
Andhra Pradesh	2,500	Anantpuramu, Kurnool
Karnataka	2,000	Pavagada (Tumakuru)
Telangana	1,000	Gattu (Mehboob Nagar)
Himachal Pradesh	1,000	Spiti Valley

Source: Solar Energy Corporation of India

- Its payment security mechanism for reducing risks to power developers has been recommended as a model to other States by MNRE.
- It has also received World Bank Group President's Award for innovation and excellence and was included in the book "A Book of Innovation: New Beginnings" released by Prime Minister.
- The Project also exemplifies India's commitment to attain the target of 175 GW of installed renewable energy capacity by the year 2022, including 100 GW of Solar installed capacity.
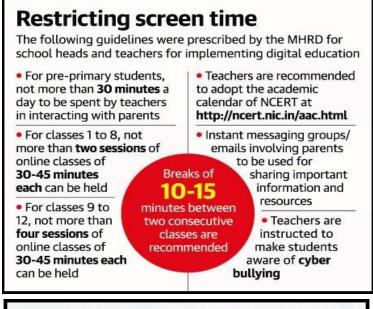
Pragyata guidelines

- PRAGYATA guidelines include eight steps of digital learning that is, Plan- Review- Arrange- Guide- Yak (talk)- Assign- Track- Appreciate

- These steps guide the planning and implementation of digital education step by step with examples.
- These are only advisory in nature and state governments can formulate their own rules, based on local needs.

Restricting screen time

The following guidelines were prescribed by the MHRD for school heads and teachers for implementing digital education

- For pre-primary students, not more than **30 minutes** a day to be spent by teachers in interacting with parents

- For classes 1 to 8, not more than **two sessions** of online classes of **30-45 minutes each** can be held

- For classes 9 to 12, not more than **four sessions** of online classes of **30-45 minutes each** can be held

Breaks of **10-15** minutes between two consecutive classes are recommended

- Teachers are recommended to adopt the academic calendar of NCERT at **http://ncert.nic.in/aac.html**

- Instant messaging groups/ emails involving parents to be used for sharing important information and resources

- Teachers are instructed to make students aware of **cyber bullying**

Plan · Yak (Talk) · Assign · Track · Review · Guide · Appreciate · Arrange

- The guidelines outline suggestions for administrators, school heads, teachers, parents and students on the following areas:
  - ✓ Need Assessment.
  - ✓ Concerns while planning online and digital education like duration, screen time, inclusiveness, Balanced online and off-line activities.
  - ✓ Modalities of intervention including resource curation, level wise delivery etc.
  - ✓ Physical, mental health and well-being during digital education.
  - ✓ Cyber safety and ethical practices including precautions and measures maintaining cyber safety.

India Energy Modeling Forum

- In the recent joint working group meeting of the Sustainable Growth Pillar, an India Energy Modeling Forum was launched.
- The forum would include knowledge partners, data agencies and concerned government ministries.
- The forum provides an unbiased platform to discuss the contemporary issues revolving around energy and environment.
- NITI Aayog will initially coordinate the activities of the forum and finalize its governing structure.

Sustainable Growth Pillar is an important pillar of India-US Strategic Energy Partnership co-chaired by NITI Aayog and United States Agency for International Development (USAID).

The SG pillar entails energy data management, energy modelling and collaboration on low carbon technologies as three key activities.

The Forum aims to:

- ✓ Provide a platform to examine important energy and environmental related issues;
- ✓ Inform decision-making process to the Indian government;
- ✓ Improve cooperation between modelling teams, government, and knowledge partners, funders;
- ✓ Facilitate exchange of ideas, ensure production of high-quality studies;
- ✓ Identify knowledge gaps at different levels and across different areas;
- ✓ Build capacity of Indian institutions.

Energy modeling or energy system modeling is the process of building computer models of energy systems in order to analyze them.

Such models often employ scenario analysis to investigate different assumptions about the technical and economic conditions at play.
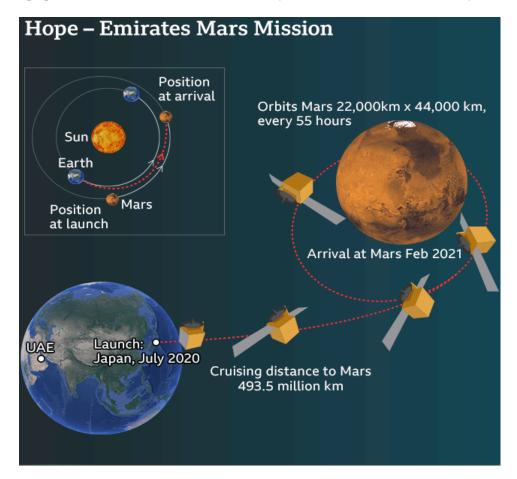
Outputs may include the system feasibility, greenhouse gas emissions, cumulative financial costs, natural resource use, and energy efficiency of the system under investigation.

Hope: UAE's first mission to Mars

- The United Arab Emirates' historic first mission to Mars is under way, after a successful lift-off in Japan. The Hope probe launched on an H2-A rocket from Tanegashima spaceport, and is now on a 500-million-km journey to study the planet's weather and climate.
- The spacecraft must blast off from the Earth during a brief launch window in July, since Earth and Mars orbit the Sun at different rates and are aligned at their closest points only once every two years.
- The Hope mission is a Mars orbiter spacecraft, which will study the thin atmosphere of Mars.
- The mission is officially named the Emirates Mars Mission (EMM) and the orbiter has been named Hope or 'Al Amal'.

- If successful, the Hope orbiter will join six others in studying Mars, from the US, Europe and India.
- The Hope probe has a mission life of one Martian year, which is almost two Earth years.

The three main objectives of the Hope probe are:

✓ to understand the climate dynamics and global weather map of Mars by studying the lower atmosphere of Mars.

✓ to explain how the weather of Mars affects the escape of hydrogen and oxygen, by correlating conditions in the lower and upper atmosphere.

✓ to understand the presence and variability of hydrogen and oxygen in the upper atmosphere, and why Mars is losing these gases to space.

Milk tea alliance

- It is a term used to describe an online democratic solidarity movement made up of netizens from Thailand, Hong Kong, and Taiwan.
- It arose in response to the increased presence of Chinese trolls and nationalist commentators on social media.

- The 'Milk Tea Alliance' is an informal term coined by social media users because in the region, tea is consumed in many nations with milk, with the exception of China.

Assam Floods

- 2020 Assam floods or 2020 Brahmaputra river floods refer to the floods in Brahmaputra River in Indian state of Assam in 2020. The floods also coincided with the worse COVID-19 pandemic in India.

- Initial flooding started in May 2020 due to heavy rainfall affecting 30,000 and destroying crops across 5 districts. Till July, the floods affected around 2 to 3 million in 27 districts and claiming the lives of more than 60 people

- Assam continues to be on the edge because of its flood disaster and this has become an annual calamity. Assam sees major floods every year and every time lives are lost, millions of people get displaced, villages, crops, infrastructure get destroyed.

- This year, almost 85 per cent area of the Kaziranga National Park has submerged.

- Brahmaputra is braided and unstable in its entire reach in Assam except for a few places. The main reasons behind the instability of the river are high sedimentation and steep slopes.

- High percentage of flood prone region: 31.05 lakh hectares of the total 78.523 lakh hectares area of the state is prone to frequent floods. And the reasons behind this high flood prone area percentage are both man-made and natural.
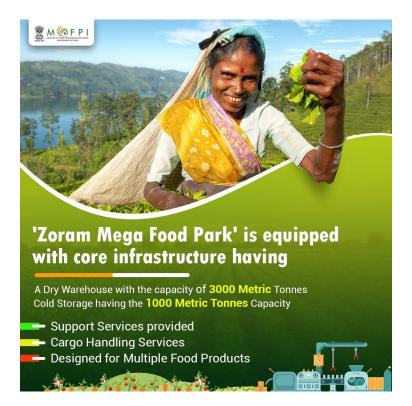
- The state has primarily relied on embankments to control floods. This flood control measure was introduced in Assam in the early 1950s when the hydrology of most Indian rivers, including the Brahmaputra, was poorly understood.
- But, several of the state's embankments were reportedly breached by the floods this year.
- Studying the river and the impact of climate change is a must to understand why the state gets flooded every year.
- Water flow information shared by China on the Brahmaputra with India, for which India pays a certain amount, should also be shared with the public, as this will help in understanding the river better and therefore help people better prepare for floods.
- More accurate and decentralised forecasts of rain can help in improving preparedness. Weather reports should be made available on district level and should be accessible to public.
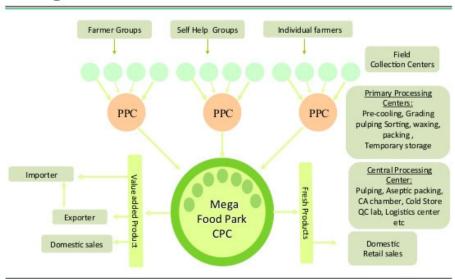
Mega Food Park

- Zoram Mega Food Park is launched in Mizoram, to benefit 25,000 farmers and create 5,000 jobs.
- This is the first Mega Food Park operationalized in the state of Mizoram.

'Zoram Mega Food Park' is equipped with core infrastructure having

A Dry Warehouse with the capacity of **3000 Metric** Tonnes
Cold Storage having the **1000 Metric Tonnes** Capacity

- Support Services provided
- Cargo Handling Services
- Designed for Multiple Food Products

- Ministry of Food Processing Industries is implementing Mega Food Park Scheme in the country since 2008.
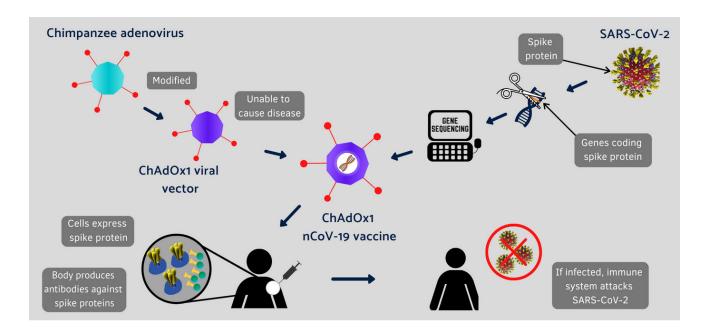
Mega Food Park Model: An Illustration

- It aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers.
- These food parks give a major boost to the food processing sector by adding value and reducing food wastage at each stage of the supply chain with particular focus on perishables.

ChAdOx1 Covid-19 vaccine

- ChAdOx1 COVID-9 was jointly developed by British-Swedish company AstraZeneca and the University of Oxford.
- It has been found to be safe and induced an immune response in early-stage clinical trials.
- The vaccine belongs to a category called non-replicating viral vector vaccines.
- This vaccine is made from a genetically engineered virus that causes the common cold in chimpanzees.
- Scientists did this by transferring the genetic instructions of the coronavirus' "spike protein" – the crucial tool it uses to invade human cells – to the vaccine. This was done so that the vaccine resembles the coronavirus and the immune system can learn how to attack it.
- The adenovirus, genetically modified so that it cannot replicate in humans, will enter the cell and release the code to make only the spike protein.
- The body's immune system is expected to recognise the spike protein as a potentially harmful foreign substance, and starts building antibodies against it.
- Once immunity is built, the antibodies will attack the real virus if it tries to infect the body.

When someone is infected with the Covid-19 virus (SARS-CoV-2), the reason it spreads in the body easily is because of the spikes on its surface. These spikes, known as the 'spike protein', allow the virus to penetrate cells and, thereafter, multiply.

Permanent commission to women officers in Indian Army

- The Ministry of Defence has issued the formal government sanction letter for grant of Permanent Commission (PC) to Women Officers in the Indian Army.
- The order specifies grant of permanent commission to Short Service Commissioned (SSC) Women Officers in all ten streams of the Indian Army.
- The 10 streams are: Army Air Defence (AAD), Signals, Engineers, Army Aviation, Electronics and Mechanical Engineers (EME), Army Service Corps (ASC), Army Ordnance Corps (AOC), and Intelligence Corps in addition to the existing streams of Judge and Advocate General (JAG) and Army Educational Corps (AEC).

Women in command

For the women in uniform, career progression is now becoming a reality with the Supreme Court directing the Centre to grant permanent commission (PC) within three months. Here is a snapshot of the long years of the fight women officers have conducted against discrimination:

It's an order

Here are some of the salient features of the order:

■ Accepts government policy to grant PC to short service commission (SSC) women officers in 10 streams of the Combat Support Arms and Services wings

■ SSC women officers are eligible for command assignments and not just staff appointments

■ SSC women officers granted PC will be entitled to all consequential benefits, including promotion and financial gains

1992: Centre notifies women eligible for appointment as officers for five years in the Army Postal Service, Judge Advocate General Department, Army Education Corps, Signal Corps, Intelligence Corps, Corps of Engineers, Corps of Electrical and Mechanical Engineering and Regiment of Artillery, among other Corps

Dec. 1996: Ministry of Defence deletes the five-year clause for enrollment

Nov. 2005: The initial process of induction of women officers under the WSES was replaced by SSCs with an outer period of 14 years. The first batch of women officers under the new scheme entered the Army in 2008

2003 and 2006: Writ petitions filed in the Delhi High Court by advocate Babita Puniya and several SSC women Army officers for permanent commission and equality of opportunity in the Army

March 2010: Delhi HC holds that women SSC officers of the Air Force and Army who had opted for PC, but not granted that status would be entitled to PC at par with male SSC officers with all consequential benefits. Contempt proceedings were then initiated by the women officers against the Union of India for non-compliance with the HC judgment. Contempt was later stayed

September 2, 2011: The case reaches the Supreme Court in appeal

- PC or permanent commission in Indian Army means a career in Indian Army till you retire.
- This paves the way for empowering Women Officers to shoulder larger roles in the organisation.

Currency Swap Arrangement (CSA)

- The Reserve Bank of India has agreed to a $400 million currency swap facility for Sri Lanka till November 2022.
- It is an arrangement between two friendly countries to involve in trading in their own local currencies.
- As per the arrangements, both countries pay for import and export trade at the pre-determined rates of exchange, without bringing in third country currency like the US Dollar.
- In such arrangements no third country currency is involved, thereby eliminating the need to worry about exchange variations.
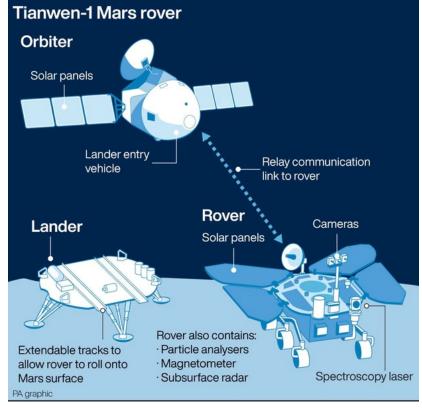
Tianwen-1

- On July 22, China launched its Mars mission.
- Known as Tianwen-1, the mission name is loosely translated to "questions to Heaven."
- The spacecraft consists of an orbiter, a lander and a rover.
- Launched on a Long March 5 rocket from Xichang, China.

- Landing site: Somewhere in Utopia Planitia, a vast plain in Mars' northern latitudes and the same place NASA's Viking 2 mission landed in the 1970s.

- Tianwen-1 will reach the Red Planet's orbit in February 2021. The rover will land on Mars in May.

- If the mission is successful, China will become the third country to achieve a Mars landing after the USSR and the United States.

Tianwen-1 Mars rover

Orbiter
Solar panels
Lander entry vehicle
Relay communication link to rover

Lander
Extendable tracks to allow rover to roll onto Mars surface

Rover
Solar panels
Cameras

Rover also contains:
· Particle analysers
· Magnetometer
· Subsurface radar
Spectroscopy laser

PA graphic

Russia, India and China (RIC) grouping

- India decided to attend a (virtual) meeting of the Foreign Ministers of Russia, India and China (RIC). This meeting seemed incongruous in this setting.

- RIC is conceived by the then Russian foreign minister Yevgeny Primakov in 1998.

- The group was founded on the basis of "ending its subservient foreign policy guided by the U.S.," and "renewing old ties with India and fostering the newly discovered friendship with China.

- In the early 2000s, the three countries were positioning themselves for a transition from a unipolar to a multipolar world order.

- The RIC shared some non-West (as distinct from anti-West) perspectives on the global order, such as an emphasis on sovereignty and territorial integrity, impatience with homilies on social policies and opposition to regime change from abroad.
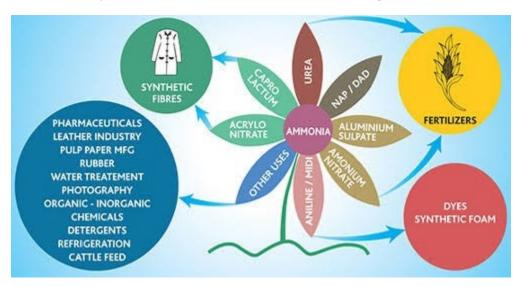
- Their support for democratisation of the global economic and financial architecture moved to the agenda of BRIC (with the addition of Brazil).

Together, the RIC countries occupy over 19 percent of the global landmass and contribute to over 33 percent of global GDP.

All three are nuclear powers and two, Russia and China, are permanent members of the UN Security Council, while India aspires to be one.

Ammonia in Yamuna

- High levels of ammonia (3 ppm) were recently detected in the Yamuna River. The most likely source is believed to be effluents from dye units, distilleries and other factories in Panipat and Sonepat districts in Haryana, and also sewage from some unsewered colonies in this stretch of the river.
- Because of this, the Delhi Jal Board (DJB) had to reduce water production capacity by 25 per cent.
- The acceptable maximum limit of ammonia in drinking water, as per the Bureau of Indian Standards, is 0.5 ppm.
- Ammonia is a colourless gas and is used as an industrial chemical in the production of fertilisers, plastics, synthetic fibres, dyes and other products.
- Ammonia occurs naturally in the environment from the breakdown of organic waste matter.

- It may find its way to ground and surface water sources through industrial effluents or through contamination by sewage.
- If the concentration of ammonia in water is above 1 ppm it is toxic to fishes.
- In humans, long term ingestion of water having ammonia levels of 1 ppm or above may cause damage to internal organs.

Green – Ag Project

- The Union government on July 28, 2020, launched the Green-Ag Project in Mizoram, to reduce emissions from agriculture and ensure sustainable agricultural practices.
- Mizoram is one of the five states where the project will be implemented. Other states include Rajasthan, Madhya Pradesh, Odisha and Uttarakhand.
- The Green-Ag Project is funded by the Global Environment Facility, while the Department of Agriculture, Cooperation, and Farmers' Welfare (DAC&FW) is the national executing agency.
- Other key players involved in its implementation are Food and Agriculture Organization (FAO) and the Union Ministry of Environment, Forest and Climate Change (MoEF&CC).
- The project seeks to integrate biodiversity, climate change and sustainable land management objectives and practices into Indian agriculture.

Ban on Chinese Apps

- Union information and technology ministry has banned 47 new apps. The move comes nearly a month after the ban on 59 Chinese apps, taking the total number of mobile applications blocked to 106.
- The new apps include clones and different versions of some of the original apps.

1. TikTok	31. Mi Video Call – Xiaomi
2. Shareit	32. WeSync
3. Kwai	33. ES File Explorer
4. UC Browser	34. Viva Video – QU Video Inc
5. Baidu map	35. Meitu
6. Shein	36. Vigo Video
7. Clash of Kings	37. New Video Status
8. DU battery saver	38. DU Recorder
9. Helo	39. Vault- Hide
10. Likee	40. Cache Cleaner DU App studio
11. YouCam makeup	41. DU Cleaner
12. Mi Community	42. DU Browser
13. CM Browers	43. Hago Play With New Friends
14. Virus Cleaner	44. Cam Scanner
15. APUS Browser	45. Clean Master – Cheetah Mobile
16. ROMWE	46. Wonder Camera
17. Club Factory	47. Photo Wonder
18. Newsdog	48. QQ Player
19. Beutry Plus	49. We Meet
20. WeChat	50. Sweet Selfie
21. UC News	51. Baidu Translate
22. QQ Mail	52. Vmate
23. Weibo	53. QQ International
24. Xender	54. QQ Security Center
25. QQ Music	55. QQ Launcher
26. QQ Newsfeed	56. U Video
27. Bigo Live	57. V fly Status Video
28. SelfieCity	58. Mobile Legends
29. Mail Master	59. DU Privacy
30. Parallel Space	

- These measures have been undertaken since there is credible information that these apps are engaged in activities which are prejudicial to sovereignty and integrity of India, defence of India, security of state and public order.

- For this, the Ministry has invoked its power under Section 69A of the Information Technology Act read with the relevant provisions of the Information Technology (Procedure and Safeguards for Blocking of Access of Information by Public) Rules, 2009.
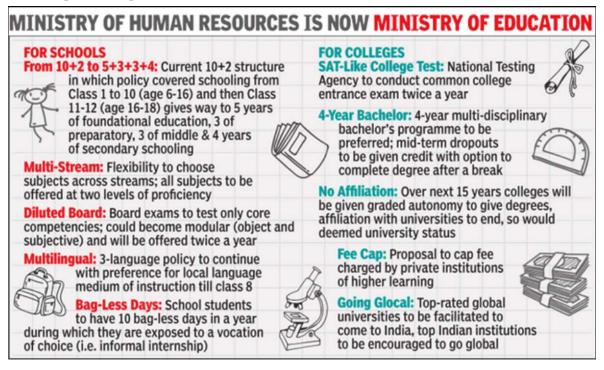
New Education Policy

- First new education policy in 34 years has been brought out. The union Cabinet gave its nod to the new policy recently.

- The aim of the National Education Policy 2020 is to create an education system which is deeply rooted in Indian ethos and can rebuild India as a global knowledge superpower, by providing high-quality education to all.

- A panel headed by former ISRO chief K. Kasturirangan submitted a draft in December 2018, which was made public and opened for feedback after the Lok Sabha election in May 2019.

- Highlights of the policy:

- Public spending on education by states, Centre to be raised to 6% of the GDP.

- Ministry of Human Resource Development to be renamed Minister of Education.

- An autonomous body, the national educational technology forum, will be created for the exchange of ideas on use of technology to enhance learning, assessment, planning and administration.

- Separate technology unit to develop digital education resources. The new unit will coordinate digital infrastructure, content and capacity building.

- By 2030, the minimum degree qualification for teaching will be a four year integrated B.Ed.

- Teachers will also be given training in online educational methods relevant to the Indian situation in order to help bridge the digital divide.

- Universalise the pre-primary education (age range of 3-6 years) by 2025.

- Universalization of Education from pre-school to secondary level with 100% Gross Enrolment Ratio (GER) in school education by 2030.

- A new school curriculum with coding and vocational studies from class 6 will be introduced.

- A child's mother tongue will be used as the medium of instruction till class 5.

- A new curricular framework is to be introduced, including the preschool and Anganwadi years.

- A National Mission on Foundational Literacy and Numeracy will ensure basic skills at the class 3 level by 2025.

- Board exams to be easier, redesigned. Exams will test core competencies rather than memorising facts, with all students allowed to take the exam twice.

- School governance is set to change, with a new accreditation framework and an independent authority to regulate both public and private schools.

MINISTRY OF HUMAN RESOURCES IS NOW **MINISTRY OF EDUCATION**

FOR SCHOOLS
From 10+2 to 5+3+3+4: Current 10+2 structure in which policy covered schooling from Class 1 to 10 (age 6-16) and then Class 11-12 (age 16-18) gives way to 5 years of foundational education, 3 of preparatory, 3 of middle & 4 years of secondary schooling

Multi-Stream: Flexibility to choose subjects across streams; all subjects to be offered at two levels of proficiency

Diluted Board: Board exams to test only core competencies; could become modular (object and subjective) and will be offered twice a year

Multilingual: 3-language policy to continue with preference for local language medium of instruction till class 8

Bag-Less Days: School students to have 10 bag-less days in a year during which they are exposed to a vocation of choice (i.e. informal internship)

FOR COLLEGES
SAT-Like College Test: National Testing Agency to conduct common college entrance exam twice a year

4-Year Bachelor: 4-year multi-disciplinary bachelor's programme to be preferred; mid-term dropouts to be given credit with option to complete degree after a break

No Affiliation: Over next 15 years colleges will be given graded autonomy to give degrees, affiliation with universities to end, so would deemed university status

Fee Cap: Proposal to cap fee charged by private institutions of higher learning

Going Glocal: Top-rated global universities to be facilitated to come to India, top Indian institutions to be encouraged to go global

- **Higher Education- related:**
- Four year undergraduate degrees with multiple entry and exit options will be introduced.
- The Phil degree will be abolished.
- New umbrella regulator for all higher education except medical, legal courses.
- An Academic Bank of Credit will be set up to make it easier to transfer between institutions.
- College affiliation system to be phased out in 15 years, so that every college develops into either an autonomous degree-granting institution, or a constituent college of a university.
- It also aims to double the Gross Enrolment Ratio in higher education, including vocational education, from 26.3% in 2018 to 50% by 2035, with an additional 3.5 crore new seats.
- Indian knowledge systems, including tribal and indigenous knowledge, will be incorporated into the curriculum in an accurate and scientific manner.
- Regions such as aspirational districts, which have large number of students facing economic, social or caste barriers will be designated as 'Special Educational Zones'.
- The Centre will also set up a Gender Inclusion Fund to build the country's capacity to provide equitable quality education to all girls and transgender students.
- Meritorious students belonging to SC, ST, OBC and other socially and economically disadvantaged groups will be given incentives.

- The NEP proposes changing the existing 10+2 Curricular and Pedagogical Structure with 5+3+3+4 design covering the children in the age group 3-18 years. Under this —
✓ Five years of the Foundational Stage: 3 years of pre-primary school and Grades 1, 2;
✓ Three years of the Preparatory (or Latter Primary) Stage: Grades 3, 4, 5;
✓ Three years of the Middle (or Upper Primary) Stage: Grades 6, 7, 8;
✓ Four years of the High (or Secondary) Stage: Grades 9, 10, 11, 12.

Aerial seeding

- The Haryana Forest Department has started aerial seeding across the state on a pilot basis.
- This technique will allow plantation in sections of the Aravallis that are either difficult to access or inaccessible altogether.
- The pilot project will help determine the effectiveness of the technology and the dispersal mechanism.
- It is a technique of plantation wherein seed balls – seeds covered with a mixture of clay, compost, char and other components – are sprayed on the ground using aerial devices, including planes, helicopters or drones.

- Seeds balls or seed pellets are dispersed in a targeted area by the low-flying drones.

- They fall to the ground with the help of the coating of clay, compost, char and other material, that provides the required weight for seeds to drop on a predetermined location rather than disperse in the wind.
- These pellets will then sprout when there is enough rain, with the nutrients present within them helping in the initial growth.
- Areas that are inaccessible, have steep slopes, are fragmented or disconnected with no forest routes, making conventional plantation difficult, can be targeted with aerial seeding.
- The process of the seed's germination and growth is such that it requires no attention after it is dispersed – the reason why seed pellets are known as the "fire and forget" way of plantation.

5 years of Digital India

- Central government's Digital India completes 5 years since its inception.
- Digital India is a campaign launched by the Government of India in order to ensure the Government's services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or making the country digitally empowered in the field of technology.

- The initiative includes plans to connect rural areas with high-speed internet networks. Digital India consists of three core components: the development of secure and stable digital infrastructure, delivering government services digitally, and universal digital literacy.

India's first Lichen Park

- Uttarakhand forest department has claimed to have developed country's first lichen park in Kumaon's Munsiyari area, spread over 1.5 acres with over 80 species of lichens collected from across the Himalayan state.

- Lichens are found in the Himalayas up to 5000 metres.

- Considered most significant bio-indicator of ecosystem fluctuations as they are more sensitive towards habitat and climate changes, lichen species are facing many threats and continue to decline from some areas of Himalayan regions because of overexploitation of natural resources, mounting pressures of urbanization, habitat-destruction, deforestation and increasing pollution, according to forest officials.

Global e-waste monitor 2020

- The Global E-waste Monitor 2020 (www.globalewaste.org) is a collaborative product of the Global E-waste Statistics Partnership (GESP), formed by UN University (UNU), the International Telecommunication Union (ITU), and the International Solid Waste Association (ISWA), in close collaboration with the UN Environment Programme (UNEP).

- A record 53.6 million metric tonnes (Mt) of electronic waste was generated worldwide in 2019, up 21 per cent in just five years, according to the UN's Global E-waste Monitor 2020.

- This makes e-waste the world's fastest-growing domestic waste stream, fueled mainly by higher consumption rates of electric and electronic equipment, short life cycles, and few options for repair.

- China is the biggest contributor to e-waste with 10.1 million tonnes (mt) followed by the United States (US) with 6.9 mt and India with 3.2 mt at 2nd and 3rd rank respectively. Together these three countries accounted for nearly 38% of the world's e-waste last year.

India stays lower middle income group

- The World Bank groups economies into one of four categories: low income, lower-middle income, upper-middle income, high income.

- The categories are used to show how different groups of countries are doing against measures such as reducing poverty, growth, increasing income per head of population, and so on.

- Gross national income (GNI) per capita is the main indicator of how well off a country is and where it sits in the four categories. The 2020 GNI per capita thresholds are:

- Low income: less than $1,036

- Lower-middle income: between $1,036 and $4,045

- Upper-middle income: between $4,046 and $12,535

- High income: greater than $12,535

- India continues to be in lower middle income group.