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# Big NEWS

*(Compilation of Analytical Discussion of Daily News Articles on  
YouTube)*

*for  
the Month of*

# July 2020

*(6th July - 1st August)*

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# 1. Suicide: A Perspective

WHO says

- Close to 800 000 people die due to suicide every year.
- For each suicide, there are more than 20 suicide attempts.
- Suicide is the third leading cause of death in 15-19-year-olds.
- 79% of global suicides occur in low- and middle-income countries.
- Ingestion of pesticide, hanging and firearms are among the most common methods of suicide globally.

## But what is Suicide?

- Let me ask you this:
  - ✓ The way that 'murder' is equated with wrongful killing of another,
  - ✓ Is it right that 'suicide' be equated with wrongful self-killing?
  - ✓ Is Suicide a moral question?

## Albert Camus says

- "There is only one really serious philosophical problem," "and that is suicide".

## Albert Camus further says

- "Deciding whether or not life is worth living is to answer the fundamental question in philosophy.
- All other questions follow from that".

## You can counter Albert Camus

- You can ask that suicide is "neither a "problem" nor a "question," but an act".

## Nonetheless, we do have our right to life in our Constitution, right?

- Yes.
- According to Article 21 of the Indian constitution,
- "No person shall be deprived of his life or personal liberty except according to procedure established by the law".
- While the constitution covers the right to life or liberty, there is the question that whether it includes the 'right to die'?

## Can Right to Life be equated with Right not to have life?

- This question was asked in In the 1996 Gian Kaur vs State of Punjab case.
- But it failed to convince the five judge bench that the Constitution only gives you the right to life and not "right not to live".

## So, is Suicide a crime?

- There is a Section 309 of the Indian Penal Code (IPC) for this.



- It clearly states: “Whoever attempts to commit suicide and does any act towards the commission of such offence, shall be punished with simple imprisonment for a term which may extend to one year or with fine or both.”
- But remember, the Indian Penal Code had been formulated during British Raj Regime of 1860, and was mainly governed by British law of that time.
- Though India continues to follow the archaic law, Britain had decriminalized suicide way back in 1961.

### **So, is it a crime or not?**

- Although section 309 is still in effect, the Mental Healthcare Act, 2017 has restricted its application.
- The relevant provision of the new act states:
- “Notwithstanding anything contained in section 309 of the Indian Penal Code, any person who attempts to commit suicide shall be presumed, unless proved otherwise, to have severe stress and shall not be tried and punished under the said Code”.

### **Back to the basic question, What is a Suicide?**

- Commonly we say that suicide is any self-caused death.
- But consider these examples:
  - ✓ An individual who knows the health risks of smoking or of skydiving, but willfully engages in these behaviors and dies as a result.
  - ✓ An individual who accidentally consumes a mouthful of hydrochloric acid, believing it to be lemonade, and subsequently dies.
  - ✓ Someone driving rash.
  - ✓ Someone in acute pain and terminally ill and choosing Voluntary Euthanasia
- These things cause ones own death but might not be termed as engaging in suicidal behavior.

### **Society acts differently on different suicides**

- Under some conditions an act of suicide is seen as exemplifying virtues as courage, generosity, or justice.
- In others, an act of suicide exhibit such vices as cowardice, selfishness, or rashness.

### **Durkheim discusses it in detail**

- You can listen to it in the video link appearing above.

### **Suicide in non-human life forms**

- They say Salmonella does it.
- Some Ants do it to protect the rest.
- How about suicidal altruism or Autothysis of Pea Aphids and Termites?
- And our very own Cytokine Storm?

## Before we finish, Let's return to Albert Camus once more

- Albert Camus wrote a philosophical essay *The Myth of Sisyphus*.
- For Camus, Sisyphus heroically does not try to escape his absurd task of endlessly and futilely pushing a rock up a mountain, but instead perseveres and in so doing resists the lure of suicide.
- Suicide, Camus contends, tempts us with the promise of an illusory freedom from the absurdity of our existence, but is in the end an abdication of our responsibility to confront or defy that absurdity head on.

## Jean-Paul Sartre & A Godless World

- Jean-Paul Sartre found suicide as a possibility of assertion of authentic human will in the face of absurdity.
- Suicide represents, according to Sartre, an opportunity to stake out our understanding of our essence as individuals in a godless world.

## There's a beautiful book, *The Sense of an Ending*

- There, some Adrian commits suicide, leaving a note addressed to the coroner saying "that the free person has a philosophical duty to examine the nature of their life, and may then choose to renounce it"

## 2. An Assessment of UN Security Council

### Introduction

- The Security Council, the United Nations' principal crisis-management body, is empowered to impose binding obligations on the 193 UN member states to maintain peace.
- The Security Council comprises five permanent members—China, France, Russia, the United Kingdom, and the United States—collectively known as the P5.
- The council's ten elected members, which serve two-year, nonconsecutive terms,
- The council's five permanent and ten elected members meet regularly to assess threats to international security, addressing issues that include civil wars, natural disasters, arms control, and terrorism.

### What Is The Debate?

- Structurally, the body remains largely unchanged since its founding in 1946, stirring debate among many members about its efficacy and authority as a mediator on matters of international security.
- Is it still relevant in the 21st century?
- What is more relevant – Sovereign nations or an institution?

### Concentration of Powers

- The P5's privileged status has its roots in the United Nations' founding, in the aftermath of World War II. The United States and Soviet Union were the outright victors of the war, and, along with the United Kingdom, they shaped the postwar political order.
- The inclusion of the Republic of China (Taiwan), envisioning international security presided over by "four global policemen."
- France a European buffer against potential German or Soviet aggression

- But Does it reflect the New Realities Post WW2?

### **The Shifting Limits of Sovereignty**

- Russia's frictions with the United States and European Union following its annexation of Crimea in early 2014 and North Korea's nuclear weapons program have added tensions.
- Us invasion of Iraq and Afghanistan?

### **Veto Issues?**

- Any one of them can veto a resolution.
- Russia vetoed a resolution that would have created an international tribunal to prosecute the pro-Russia separatists in eastern Ukraine who are thought to have shot down a Malaysian Airlines passenger jet using a Russian-made missile.

### **Relevance of Regional Organisation?**

- Regional organizations have played an increasingly important role in peacekeeping and conflict resolution.
- For instance, the council authorized the use of force in Libya in 2011 after the Arab League called for a no-fly zone, which the North Atlantic Treaty Organization (NATO) then executed.

### **Responsibility to Protect?**

- The emergence of the responsibility to protect (R2P) in the early 2000s appeared to justify the use of force outside Security Council authorization by qualifying the principle of noninterference in sovereign affairs. The doctrine, as adopted by the UN General Assembly in 2005, stipulates that states have a responsibility to protect their populations from crimes against humanity.

### **Representation Issues?**

- The regions like far East Asia, South America, Africa have no representation in the permanent membership of the council.

### **Sanctions?**

- Arms embargoes, travel bans, asset freezes, and import/export bans on individual goods, rather than comprehensive embargoes, are now the norm.
- Masood Azhar – a Global Terrorist?

### **Blue Helmets or Blue Berets? Peacekeeping Missions?**

- United Nations Peacekeeping helps countries torn by conflict create conditions for lasting peace.
- Peacekeeping mandates continue to be scrutinized for their scope, cost, and cases in which peacekeepers themselves have committed abuses.

### **Sanctions /Military Actions Vs Economic/Social/ Political Turmoil**

- Its powers to establish international sanctions, and the authorization of military action through Security Council resolutions which are binding to member states can have serious consequences on economies.

## Current Geopolitical Realities

- Many critics, including member states from the developing world, charge that the council's structure does not reflect current geopolitical realities. The council was expanded from six elected members to ten in 1965, and, in 1971, the People's Republic of China took the permanent seat previously occupied by the Republic of China (Taiwan). Since then, the body's composition has remained unchanged.
- Relevance of G 4

## Benefits of Inclusiveness

- UN Security Council Resolution 1973, mandating armed international intervention in Libya to protect civilians, illustrated that a more inclusive UN Security Council configuration was capable of approving the use of force in an ongoing internal conflict. It also showed that a way forward could be found even when there was not full agreement among states: Germany voiced its misgivings by abstaining in the Security Council vote; nevertheless, it did not block the North Atlantic Treaty Organization (NATO), of which it is a member, from carrying out the operation.

## Academic Context and Resources (Lack Of Transparency)

- It is hard enough to take a snapshot of the Council at any given time, due to its long, multifaceted agenda, opaque proceedings, and uncertain impact on international relations. Partly for this reason, throughout the 1990s the Council had been studied primarily through the lens of international law, one particular crisis, or one individual's memoirs.

## If Not Security Council; Then What?

- Security Council decisions remain the most appropriate way to ratify and codify the appropriate major power responses.

## Way Forward

- Geopolitical tensions, growing inequality, terrorism, cyber security, nuclear weapons, climate change, and humanitarian and migratory crises cannot be solved by any single country alone, nor can they be ignored and left to others to solve. Global threats are shared, so too must be the solutions to them.

## 3. Yoga Day

- It's योग, Not योगा

### What is it?

- Soldiers performing Pranayama and Surya namaskar at the backdrop of snow-covered mountain slopes at near Khardung La, Ladakh.

### Why did they do it?

- Because it was June 21 International Yoga Day United Nations celebrates it across the world
- Theme for this year was "Yoga for Health – Yoga at Home"
- Yes, because of Social Distancing

### When was the First Time it was celebrated?

- 2015.

- The UN proclaimed June 21 as International Day of Yoga by passing a resolution on December 11, 2014.

## What does Yoga Mean?

- It's Yog.
- Addition.
- That is, to join or to unite.
- It symbolises the union of a person's body and consciousness.

## What is Yog Sutra

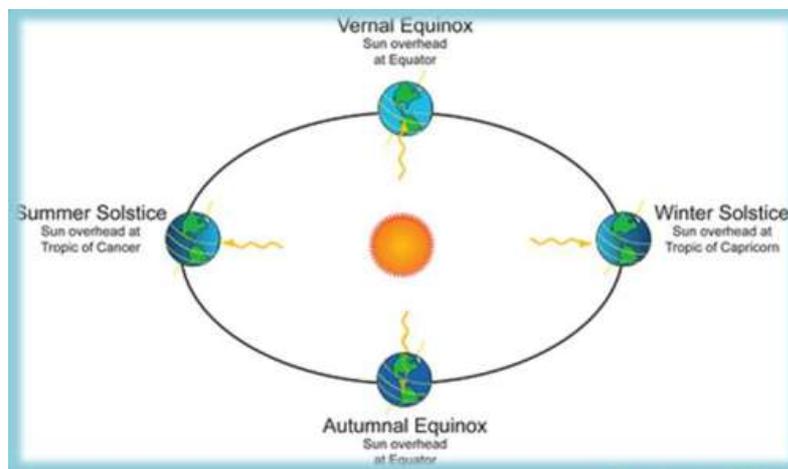
- The Yoga Sūtras of Patañjali are a collection of 196 Sanskrit sutras (aphorisms) on the theory and practice of yoga.

## What is Ashtanga?

- Patanjali defines yoga as having eight components:
  - ✓ Yama (abstinences)
  - ✓ Niyama (observances)
  - ✓ Asana (yoga postures)
  - ✓ Pranayama (breath control)
  - ✓ Pratyahara (withdrawal of the senses)
  - ✓ Dharana (concentration)
  - ✓ Dhyana (meditation)
  - ✓ Samadhi (absorption)

## Why is it celebrated on 21st June?

- Because it coincides with the Summer solstice



## Some important aspects of Summer Solstice

- On the day of the solstice, the northern hemisphere received the longest stretch of daylight in a given year.

- The amount of incoming energy the Earth received from the Sun on this day is 30 per cent higher at the North Pole than at the Equator.

### What does Solstice mean by the way?

- Solstice means “sun stands still” in Latin.

### 2020’s Summer Solstice coincided with an ANNULAR Solar Eclipse

- A solar eclipse is witnessed when the moon is aligned between the Sun and Earth, blocking the light received by the Earth from the Sun.
- An annular solar eclipse, on the other hand, happens when the Moon is the farthest from the Earth, because of which, it looks smaller and does not block the entire view of the Sun creating a “ring of fire” effect.

## 4. An Assessment of the Coronil Issue

### The Issue

- Ministry of AYUSH has asked Baba Ramdev’s Patanjali Ayurved to stop advertising its Coronil medicine
  - ✓ It is claimed to be a “100 per cent cure” against COVID-19
- It is alleged that the company did not follow due processes before launching the “Corona Kit”.
- Uttarakhand government said that Patanjali Ayurveda Ltd had the licence only for manufacturing an immunity booster against cough and fever. There was nothing in their application related to the treatment of coronavirus

### Ingredients of Coronil

- Giloy
  - ✓ It has antioxidants that are known to neutralise free radicals and prevent inflammation
  - ✓ It purifies blood, increases immunity, removes toxins from the body and fights against bacteria and virus effectively
  - ✓ Its anti-inflammatory properties help in tackling respiratory problems like cough, cold and breathing problems
- Ashwagandha
  - ✓ Boosts immunity with its antioxidant properties
  - ✓ Its natural component called withanone (Wi-N) can block the replication process of the novel virus and treat the condition
  - ✓ Reduces the level of stress hormone called cortisol, which increases when you are suffering from deadly diseases
  - ✓ Its anti-cancer properties can improve body’s muscle mass and strength
- Tulsi (a.k.a. Basil)
  - ✓ It has a rich nutritional value. It contains iron, zinc, vitamin A, C and calcium etc.

- ✓ Acts as an adaptogen and promotes mental balance
- ✓ Prevents the onset of certain respiratory disorders like cough, cold, asthma and bronchitis

## Coronil & Process of Drug Approval

- The advertising of Ayurvedic drugs is governed by the Drugs and Magic Remedies (Objectionable Advertisements) Act. The Act does talk about “false claims” and “directly or indirectly giving a false impression regarding the true character of the drug”. But serious diseases such as AIDS or encephalitis, which have emerged in the past 40 years, are not listed under the law.
  - ✓ In February, the Union Ministry of Health and Family Welfare released a draft of an amendment to the 1954 Act to correct such shortcomings. The Centre has used the 1954 Act to scrutinise Patanjali’s tall claims – the AYUSH ministry’s notice to Baba Ramdev’s outfit was served under this law
- Patanjali, reportedly, sought regulatory approval for individual medicines, that it later included in the “Corona Kit”, as “immunity boosters” and as remedies for “cough and breathlessness”. In claiming that these medicines cure COVID, Ramdev’s company is guilty of flouting medical – and business – ethics, while also discrediting Ayurveda.
  - ✓ The firm had displayed an image of Coronavirus on the tablet, the licencing authority said this was in violation of relevant sections under the provisions of Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954
- As per due process, the state government is informed before a trial, which further refers the request to the state’s clinical trial committee and ethics committee
  - ✓ After getting permission from these committees, the request is forwarded to the Drug Controller General of India (DCGI) and the Indian Council of Medical Research (ICMR) who gives the final approval
- The notice will be sent to the firm under Rule 170 of the Drugs and Cosmetics Act, 1940, which makes it compulsory for companies to advertise any product in print and electronic media only with the permission from the state licensing authority.

## Central Drugs Standard Control Organisation

- It is the highest office on drugs
- It is the national regulatory body for Indian pharmaceutical and medical devices and serves parallel function to the FDA of the US
- Within the CDSCO, the Drug Controller General of India (DCGI) regulates the pharmaceutical and medical devices, under the gamut of the Ministry of Health and Family Welfare
- The Drugs & Cosmetics Act, 1940 and rules 1945 have entrusted various responsibilities to central & state regulators for regulation of drugs & cosmetics.
- Under the Drugs and Cosmetics Act, CDSCO is responsible for approval of Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, control over the quality of imported Drugs in the country and coordination of the activities of State Drug Control Organizations by providing expert advice with a view of bring about the uniformity in the enforcement of the Drugs and Cosmetics Act.

- Further CDSCO along with state regulators, is jointly responsible for grant of licenses of certain specialized categories of critical Drugs such as blood and blood products, I. V. Fluids, Vaccine and Sera.

## Laws in Place

- Drugs and Cosmetics Act 1940
- Drugs and Magic Remedies (Objectionable Advertisements) Act 1954

## Vaccine Development

- A new vaccine candidate has to pass testing in animals, following which clinical trials kick in. Over three phases, the vaccine candidate's safety and efficacy are tested as per protocols. A fourth stage involves collection and analysis of post-marketing data

## Pre-clinical Trials

- In this primary stage, scientists test the vaccine on animals such as mice or monkeys to see if it produces an immune response
- Phase 1
  - ✓ First step where the experimental vaccine is given to humans, usually between 20-80 subjects, to test safety and dosage and check whether it stimulates the immune system
- Phase 2
  - ✓ A larger group of several hundred individuals are enrolled for testing and they are split into groups age-wise such as children and elderly. In this phase, the candidate vaccine's safety, immunogenicity, proposed doses, schedule of immunisation and method of delivery is studied
- Phase 3
  - ✓ The vaccine candidate is given to thousands of people in this stage. The scientists check how many become infected compared with volunteers who receive a placebo
- Approval
  - ✓ After Phase III trials, the vaccine developer submits a license application to the regulatory authority in their respective country. The regulator then inspects the factory where the vaccine will be made and approves its labeling.
  - ✓ During a pandemic, a vaccine may receive emergency use authorisation before a formal green signal

## Human Challenge Trials

- Under this, participants of both the vaccine and placebo group upon consent are deliberately exposed to the infection – thus are “challenged” by the disease organism
- Proponents believe that they save valuable time in vaccine development as researchers would not have to wait for participants to contract the infection under real-world conditions
  - ✓ By replacing conventional Phase 3 testing of vaccine candidates, such trials may subtract many months from the licensure process, making efficacious vaccines available more quickly
- It also requires significantly less number of people than regular Phase 3 trials, which require thousands of volunteers

## Ethics of Clinical Trails

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## 5. Privatisation of Railways

### Introduction

- Unlike the airlines, the Railways is what in economics is known as a natural monopoly. The initial infrastructure costs are so high in the railways, as compared to the cost of operation, that the incumbents in the market are very strongly advantaged and proper market competition is impossible.

### Issues (Railways)

- Congested networks
- Organizational structure
- Low Quality of Service
- Internal generation of resources
- Efficiency of terminals
- Economies of scale
- Impact on the Economy
- Increasing Number of Accidents:
- Limited Coverage
- Issue of Accountability
- Difficult to privatize a vertical

### Benefits of Privatisation

- Improved Infrastructure
- Normalization of prices
- Improved Security
- Better R&D
- Foreign capital

## Example to Consider

- TEJAS – run by IRCTC
- BRITIAN

## Way Forward

### Bibek Debroy Committee

- Transition to commercial accounting
- Streamline recruitment & HR processes
- Focus on non-core areas
- Decentralisation
- Indian Railway Manufacturing Company
- Encouraging private entry
- Independent regulator
- Raising resources

### Other Way Forwards

- Better utilization of existing infrastructure to address congestion
- Rationalize fare structures and subsidies, and monetize assets to generate revenues
- Enhance safety of trains to reduce accidents and modernize stations:
- Enhance the ease of doing business
- Increase the share of non-fare revenues in total revenue

## Conclusion

- Corporatized rather than privatized.



## 6. Disengagement at Galwan

### Special Representatives Meet

#### Event

- National Security Advisor Ajit Doval and Chinese State Councillor and Foreign Minister Wang Yi talked
- They agreed that it is necessary to ensure complete disengagement of troops along the LAC at the earliest and de-escalation from India-China border areas for full restoration of peace and tranquility.
- Doval and Wang are Special Representatives for the boundary talks.
- They earlier met in 2018 and 2019.
- The decision to activate the NSA-led SR mechanism was taken by the South Block.

## The Chinese Statement

- “The right and wrong of what recently happened at the Galwan Valley in the western sector of the China-India boundary is very clear. China will continue firmly safeguarding our territorial sovereignty as well as peace and tranquility in the border areas.”
- China, did not, however, repeat its claim of sovereignty over the Galwan Valley.
- The Chinese statement said both countries “agreed” to strengthen communication through the mechanism of the SRs, hold meetings of the Working Mechanism for Consultation and Coordination on China-India Border Affairs without interruption, consistently improve and strengthen confidence-building measures

## The MEA Statement

- The MEA issued a statement which “re-affirmed that both sides should strictly respect and observe the Line of Actual Control” and “should not take any unilateral action to alter the status quo”.
- “China will continue firmly safeguarding our territorial sovereignty..” The Indian readout did not counter this part of the Chinese statement – this is being read perhaps as a conciliatory space yielded to Beijing.
- The MEA statement also said they “agreed” that the two “Special Representatives will continue their conversations”

## Common in Both Statements

- Both statements had a common line: to “not allow differences to become disputes”
- This is a mantra of sorts, first formulated in June 2017 when President Xi Jinping and Prime Minister Narendra Modi met in Astana, and reiterated in Xiamen in September 2017 after the end of the Doklam standoff.
- Both statements also invoked the understanding between Modi and Xi at the Wuhan and Mahabalipuram informal summits on maintaining peace and tranquility.
- Both statements talked about “consensus reached between the leaders”
- The Chinese statement said, in the context of the app ban, “achieving development and revitalization is the top priority where we share long-term strategic interests”

## The SR Mechanism

- New Delhi activated the Special Representative (SR) mechanism on the boundary talks
- National Security Advisor Ajit Doval talked to his counterpart, China’s State Councillor and Foreign Minister Wang Yi, with the sole objective of “de-escalation” and “defusing” the situation
- It is said that this is a “tool kit” New Delhi has tried to reach out to Beijing at a “higher level” – a State Councillor is higher than the Foreign Minister in the Chinese hierarchical system.
- In India’s case, both Jaishankar and Doval are at the same level – both have Cabinet rank.
- On the Chinese side, the Foreign Minister and the State Councillor (the Special Representative) is the same person since 2018.

- The 22nd Meeting of the Special Representatives of India and China was held in New Delhi on December 21, 2019.

## The Withdrawal

- Chinese troops have moved back by around 1.5 km from the site of the June 15 clashes at Patrolling Point 14 in the Galwan Valley.
- This rearward movement away from the LAC has been matched by the Indian side as part of an initial step of the disengagement process
- The Chinese military camp at PP14 in Galwan Valley has been completely dismantled
- At the other faceoff sites at PP15 and PP17A (Gogra) in the Hot Springs area, there are expectations of similar rearward movement
- There are, however, no signs of any disengagement in the Pangong Tso area

## Indian Response

### Cautious Optimism

- After the first step is fully executed, a de facto 'buffer zone' will be created which both sides will not enter to rule out clashes.
- The size of this 'buffer zone' will vary at each place and "would be temporary".
- At Galwan, the 'buffer zone' is expected to lie on the Indian side of the LAC, which will keep the Indian soldiers to the west of Shyok river while the Chinese soldiers will be to the east of the LAC.
- The completion of this first step is expected to take two to three weeks.
- The second step will pertain more to de-escalation where troops, heavy weaponry and specialist equipment massed along the border will go back to their bases.

### Special Representative Mechanism

- The SR mechanism was institutionalised in 2003 after former Prime Minister Atal Bihari Vajpayee's visit to China led to the agreement, to resolve the boundary issue.
- The special representatives undertake discussion to seek fair, reasonable and mutually acceptable solution of the border issue at earliest.
- In the first phase SRM established political parameters and guiding principle for resolution of issue
- Peace and tranquillity along LAC has been maintained
- Both the sides have established mechanism to deal with border transgressions effectively and speedily.
- SRM has not yet been able to draw framework for resolution of dispute.
- SRM has been successful in reducing border transgressions along LAC along the western border, but does not include eastern borders.

### Informal Summits

#### Mamallapuram Summit: 2nd India-China Informal Summit

- A new era of cooperation will begin today through 'Chennai Connect', PM Modi said

- The prime minister said strategic communication between the two countries increased following the first informal summit in Wuhan
- India and China had decided to prudently manage differences and not to allow them to become disputes
- In the Mamallapuram summit, the focus of the talks is likely to be on steps to ensure mutual development and expanding overall ties.
- The focus of the meeting is on improving people to people contact and on how to maintain peace and tranquillity on the India-China border

## 7. Elyments

### What is the Elyments App?

- The Elyments app, created by Sumeru Software Solutions, was launched by Vice President M Venkaiah Naidu on 5th July 2020.
- It is a new social media platform under Aatmanirbhar Bharat campaign.
- The new Made in India app is available for download worldwide both on iOS and Android platforms.
- After 59 Chinese apps were banned in the country, Elyments has been launched and claims to be India's first official social media super App.

### What is a Super App?

- Super apps essentially serve as a single portal to a wide range of virtual products and services.
- The most sophisticated – apps like WeChat and Alipay in China – bundle together online messaging (similar to WhatsApp), social media (similar to Facebook), marketplaces (like eBay) and services (like Uber).
- One app, one sign-in, one user experience – for virtually any product or service a customer may want or need.
- In South East Asia, for example, two super apps have emerged from the leading ride-share platforms, Go-Jek and Grab. Both apps now offer a range of other services from food delivery through to medical advice, and both are competing to help consumers select and purchase financial products.

### Advantages of Elyments App

- Elyments has basic features of popular social networking apps such as feeds, the discover option where you can follow celebrities, athletes, politicians, etc.
- The notifications bar has been replaced by Alerts which lets you track friend requests and activities such as likes, comments on your posts.
- Users can also use filters while clicking photos, another common feature in various apps like Snapchat, Instagram, etc.
- The homegrown app has been made keeping in mind Indian audiences as it is available in eight different regional languages. It also allows commands in regional languages.
- The app is free for download and lets the users make audio and video calls including conference calls.

## Privacy concerns regarding Elyments App

- One of the main issue surrounding foreign apps was that of data security.
- Privacy is being highlighted as one of the main features of the Indian super app. The creators claim that the user data of the app will be stored within the country unlike most foreign apps.
- Elyments' creators claim that their data will not be shared with third party without the user's explicit consent. The nation's top privacy professionals have been guiding the design of the product to ensure privacy.
- In the coming weeks, Elyments is in plans to launch a slew of other features that include audio or video calling, public profiles that can be subscribed to, and an interface for secure payments. And, there will be a curated commerce platform to promote domestic brands.

## 8. Why is Kuwait sending 8 Lakh Indians back?

### Kuwait - Location



### Kuwait

- Country in Western Asia
- Situated in the northern edge of Eastern Arabia at the tip of the Persian Gulf.
- It borders Iraq to the north and Saudi Arabia to the south

### Kuwait - Population

- As of 2016, Kuwait has a population of 4.5 million people 1.3 million are Kuwaitis 3.2 million are expatriates.



- Expatriates account for approximately 70% of the population

### Expat Quota Bill

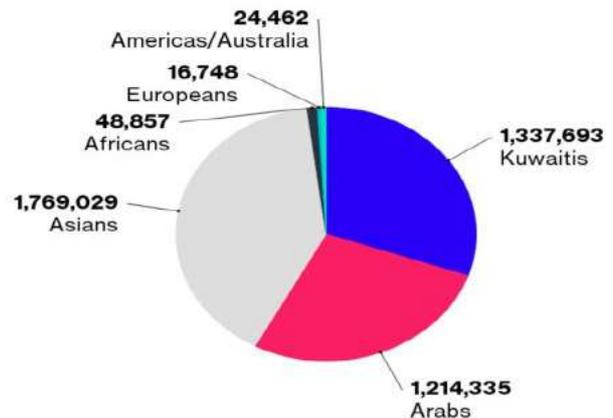
- It proposes to bring down the population of expatriates in the country to 30% of the total population of 4.3 million before the Parliament elections by year end.
- The bill proposes to reduce the number of Indians, the largest expatriate community, to 15% of the population.
- Similar quotas have been fixed for other nationalities.
- If the Bill is enacted, around 8,00,000 of the 1.45 million Indians in Kuwait will be forced to return.



- Within the Expats population, India constitutes 14.5 lakh taking up to half of the Expat population since the Indian population cannot exceed above 15%, only 6.5 lakh will be allowed to keep their jobs, leaving other 8 lakhs unemployed and homeless.
- Non-Resident Keralites will be the worst hit. The legal and legislative committee of Kuwait's National Assembly has approved the draft Bill.

### Demographic pressures

Migrant workers in Kuwait outnumber the local population 3-to-1



### Remittances

- Kuwait is a top source of remittances for India.
- In 2018, India received nearly \$ 4.8 billion from Kuwait as remittances.

### Why this Bill

- High incidences of COVID-19 in the expats.
- Slump in oil prices
- As a pretence to implement stricter visa regimes and border controls.
- According to the Kuwaiti minister who produced the bill, there is a real problem in the population structure of Kuwait as most of the expats are illiterate.



## Nothing New

- Saudi Arabia introduced the 'Nitaqat', or nationalisation, policy in 2016 to prioritise jobs for locals.
- In 2020, Oman announced that all expats working in the government sector will be replaced by its own nationals.

## But The Numbers Are Not Sure

- According to the population of overseas Indians published in the Ministry of External Affairs, the Government of India puts 1,028,274 as Non-Resident Indians (NRIs) and another 1,587 as Persons of Indian Origin, totalling 1,029,861 in Kuwait.
- The Embassy of India in Kuwait put the number of Indian nationals legally residing in Kuwait at over a million.
- The Kerala and Tamil Nadu Migration Surveys, conducted by us at the Centre for Development Studies (CDS) since 1998, put the number of Keralites and Tamils in Kuwait as 130,000 and 140,000 respectively, and these two states dominate the total number of Indians in Kuwait.
- It can be safely estimated that one million in Kuwait is an overestimation, unless we conduct an India Migration Survey to provide reliable estimates of Indians by countries of destination.
- Even if we agree with the Embassy of India in Kuwait's estimate, the proportion of Indians in Kuwait is just 23 percent of its total population – which means that even if the cap reduces to 15 percent as the Bill proposes, only 300,000 Indians are likely to return.
- Thus it is safe to say that there will be no impact on either Indian emigration to Kuwait or decline in remittances.

## 9. Information Asymmetry

**Nepotism**

**Mental Health**

**Change in CBSE Syllabus**

**Religion vs Corona**

**Trade**

**Judiciary**

**Police Reforms**

**University Rankings**

**Social Issues**

**Disaster Management**

**Try To Answer an Ethics Question**

- There is a disaster prone state having frequent landslides, forest fires, cloudbursts, flash floods and earthquakes, etc. Some of these are seasonal and often unpredictable. The magnitude of the disaster is always unanticipated. During one of the seasons a cloudburst caused a devastating floods and landslides leading to high casualties. There was major damage to infrastructure like roads, bridges and



power generating units. This led to more than 100000 pilgrims, tourist and other locals trapped across different routes and locations. The people trapped in your area of responsibility includes senior citizens, patients in hospitals, women and children, hiker, tourist, ruling parties, regional presidents along with his family, additional chief secretary of the neighboring state and prisoners in jail.

- As a civil services officer of the state, what would be the order in which you would rescue these people and why? Give Justifications (20 Marks) (200 Words)

## 10.Rewa Solar Power Plant – Largest in Asia?

### Rewa Ultra Mega Solar Power Project

- Prime Minister Narendra Modi on Friday inaugurated “Asia’s largest solar power plant” in Madhya Pradesh’s Rewa district
- The 750MW ultra mega solar power plant is spread over 1,590 acres of land.
- The project comprises three solar generating units of 250 MW each located on a 500-hectare plot of land inside a solar park with a total area of 1500 hectare.
- The Rewa Ultra Mega Solar Power Project is one of the largest single-site solar power plants in India and the world.

### Largest Solar Plant?

#### But is it?

- While it is one of the largest single-site solar power plants in India, it is not the largest in Asia.
- The distinction of the world’s second largest photovoltaic power station goes to the Bhadla Solar Park, with a capacity of 2,245 MW, in Jodhpur district in Rajasthan, and the Pavagada Solar Park in Tumkur district, Karnataka, which has a capacity of 2,050 MW.
- Bhadla Solar Park - 2,250MW: The Bhadla Solar Park is located in Bhadla village, in Rajasthan's Jodhpur district, is claimed to be the largest solar power plant in the world. It has an area of 14,000 acres and has been installed with a capacity of nearly 2,250 megawatts (MW). It is fully operational.
- Shakti Sthala solar power project - 2,050 MW: The Pavagada park was developed by the Karnataka Solar Park Development Corporation Limited (KSPDCL), a joint venture between the Solar Energy Corporation of India (SECI) and the Karnataka Renewable Energy (KREDL).
- According to data from Bloomberg New Energy Finance, there are nine solar plants that are bigger than the one at Rewa.

### Rewa Ultra Mega Solar Limited (RUMSL)

- The solar park is developed by the Rewa Ultra Mega Solar Limited (RUMSL), a joint venture company of Madhya Pradesh Urja Vikas Nigam Limited (MPUVN) and Solar Energy Corporation of India (SECI), a central public sector undertaking.
- Mahindra Renewables Private Ltd, ACME Jaipur Solar Power Private Ltd and Arinsun Clean Energy Private Ltd were selected by RUMSL through a reverse auction for developing the three solar generating units.
- The process of reverse auction in bidding for projects was tried for first time in India for this project.

- This is the first solar project in India where different categories of customers have contracted to buy power – Madhya Pradesh Power Management Company Limited (which will get 76 per cent of the power from the plant) and the Delhi Metro Rail Corporation (DMRC being an open access consumer).

## Reverse Auction

- A reverse auction mechanism is an auction approach to procurement, wherein sellers which meet certain minimum criteria are eligible to submit non-negotiable price bids.
- The buyer (typically a utility) then selects winning sellers based on the lowest priced bids.
- An auction is held to such that developers of system-side renewable distributed generation projects bid the lowest prices they would be willing to accept to develop renewable energy projects.
- It has been used to let the competitive market determine the price paid for renewables.
- Developers are paid a price that is sufficient to bring projects online, but also provide ratepayer protection against “overpayment”.

## Finance

- The total cost of the project is expected to be around Rs 4000 crore.
- A central financial assistance of Rs 138 crore has been provided to RUMSL for the development of the park.
- International Finance Corporation, a World Bank group company, has invested close to \$440 million or Rs 2,800 crore in the project and Power Grid Corporation of India has developed the 220/400 KV inter-state transmission system under green corridor to facilitate evacuation of power from the project site to consumers.
- It is also the first project to get funding from The World Bank and Clean Technology Fund in India.

## Environment

- The 750-MW solar plant is quite large in terms of scale, and is expected to reduce the country's emission drastically, by an amount equivalent to 15 lakh tonne of carbon dioxide annually.
- It also exemplifies India's commitment to attaining the target of 175GW of installed renewable energy capacity by the year 2022, including 100GW of solar installed capacity, the government has said.
- India has set itself a target of 175 gigawatt (GW) RE capacity by 2022, mainly in the form of 100 GW solar and 60 GW wind, by December 31, 2022.
- 175 GW interim target is 100 GW of solar, 60 GW of wind, 10 GW of bio-mass and 5 GW of small hydro.

## Significance

- The Rewa project is being acknowledged for its robust structuring and innovations.
- Its payment security mechanism is expected to reduce risks to power developers and has been recommended as a model to other states by the Renewable Energy Ministry.
- The payment security mechanism mandates that distribution companies would offer a letter of credit to generating firms as an assurance of payments for the supply of power.

- The Rewa Solar Project is first solar project in the country to break the grid parity barrier.
- Grid parity occurs when an alternative energy source can generate power at a cost of electricity that is less than or equal to the price of power from the electricity grid.
- “The idea behind 'One World, One Sun, One Grid' is to fulfill the energy needs of many smaller nations on the planet”, the PM said while inaugurating it.
- The PM gave this mantra at the 2nd Global RE-Invest meeting of Indian Ocean Rim Association and the first assembly of the International Solar Alliance.

## Future

- Odisha is aiming at increasing its solar capacity to 1500MW in a couple of years.
- Punjab is hoping that the PM-KUSUM, a 10GW grid scheme to solarise agriculture pumps will help cut its massive expenditure on subsidised electricity to farmers.
- Indian Railways is installing solar power plants in vacant land, with an aim to make the state-run rail network 'net zero' carbon emission by 2030. The projects include those in Raebareilly (UP), Bina (MP), Bhilai (Chhattisgarh) and Diwana (Haryana).
- Power from the Bina installation is expected to be operational by next week.

## The China Factor

- A vast majority of the photo-voltaic (PV) 'solar panels', not to mention other infrastructure equipment, are dependent on China.
- Last year, India's power sector imported Rs 70,000 crore worth of gear from abroad, a good chunk of it from China.
- In the wake of the Galwan clash, for imported solar panel from China, duty on solar cells will be 15 per cent now and up to 40 per cent next year (Although there is a proposal to exempt firms which have power purchase agreements with procuring states)
- Stricter quality specifications and limiting govt funding for projects using Chinese equipments are also on the anvil.
- According to a power ministry report, all but five or so critical items used for generating, transmitting and distributing power is available locally. Yet, they are generally imported from China since it tends to be cheaper.
- Indian solar companies are highly dependent on China in terms of importing components as over 80 per cent of solar cells and modules are imported from the country because of its competitive pricing compared to domestic manufactures.
- The proficient but not pre-eminent alternative could be exploiting the industry in Vietnam and Taiwan.
- China has worked aggressively on ramping up not just renewable energy generation, but production and manufacturing as well and is currently the world's largest exporter and installer of solar panels.
- To scale up local manufacturing, we need to put in place a long-term policy, coupled with infrastructure and the right incentives to support the same. Investment into R&D is imperative.

- India needs to think about complete vertical integration if we want to attempt self-sufficiency in solar equipment manufacturing.

## 11. Padmanabhaswamy Temple and the Supreme Court verdict

### Why in News?

- The Supreme Court on July 13th 2020 upheld the right of the Travancore royal family to manage the property of deity at Sree Padmanabhaswamy Temple in Thiruvananthapuram.
- The court said that, as per customary law, the shebait rights (right to manage the financial affairs of the deity) survive with the members of the family even after the death of the last ruler.

### All about the Padmanabhaswamy Temple

- The Padmanabhaswamy temple is a Hindu temple located in Thiruvananthapuram, the state capital of Kerala, India.
- The name of the city of Thiruvananthapuram in Malayalam translates to "The City of Lord Ananta", referring to the deity of the Padmanabhaswamy temple.
- The temple is built in an intricate fusion of the Chera style and the Dravidian style of architecture, featuring high walls, and a 16th century gopura.
- The principal deity Padmanabhaswamy (Vishnu) is enshrined in the "Anantha Shayana" posture, the eternal yogic sleep on the serpent Adi Shesha.
- The Lord's right hand is placed over a Shiva lingam. Sridevi-Lakshmi, the Goddess of Prosperity and Bhudevi the Goddess of Earth, two consorts of Vishnu are by his side.
- The Temple has been referred to in the (only recorded) Sangam period of literature between 500 BCE and 300 CE several times.
- The temple is one of the 108 principal Divya Desams ("Holy Abodes") in Vaishnavism, and is glorified in the Divya Prabandha.
- The ancient late-Tamil-Sangam epic Silappatikaram, speaks of the then Chera King Cenkuttuvan receiving gifts of gold and precious stones from a certain 'Golden Temple' which is believed to be the Pasmanabhaswamy Temple.
- The foundation of the present gopuram was laid in 1566. The temple has a 100-foot (30 m), 7-tier gopuram made in the Pandyan style. The temple stands by the side of a tank, named Padma Theertham (meaning the lotus spring).
- Padmanabhaswamy is the tutelary deity of the royal family of Travancore.
- The Padmanabhaswamy Temple and its property were controlled by the Ettara Yogam (King and Council of Eight) with the assistance of Ettuveetil Pillamar ("Lords of the Eight Houses"). It is believed that eight members of Ettara Yogam (seven Potties and the Maharaja of Travancore) received their rights from Lord Parashurama himself.

## What is the case about?

- The central legal question was whether Utradam Thirunal Marthanda Varma, the younger brother of Chithira Thirunal Balarama Varma, the last Ruler of Travancore, could claim to be the “Ruler of Travancore” after the death of the ruler in 1991.
- The court examined this claim within the limited meaning of that term according to the Travancore-Cochin Hindu Religious Institutions Act, 1950 to claim ownership, control and management of the ancient Sree Padmanabha Swamy Temple.
- All the temples which were under the control and management of the erstwhile Princely States of Travancore and Cochin were under the control of the Travancore and Cochin Devaswom Boards before 1947.
- However, as per the Instrument of Accession signed between the princely states and the Government of India, since 1949, the administration of the Padmanabhaswamy Temple was “vested in trust” in the Ruler of Travancore. The state of Kerala was carved out in 1956 but the temple continued to be managed by the erstwhile royals.
- In 1971, privy purses to the former royals were abolished through 26th constitutional amendment stripping their entitlements and privileges. The move was upheld in court in 1993 and the last ruler of Travancore who died during the pendency of this case continued to manage the affairs of the temple till then.
- In 1991, when the last ruler’s brother took over the temple management, it created a furore among devotees who moved the courts leading to a long-drawn legal battle. The government joined in; supporting the claims of the petitioner that Marthanda Varma had no legal right to claim the control or management of the temple.

## Kerala High Court 2011 case

- A consequence of who has administrative rights over the temple is whether the vaults of the temple will be opened.
- In 2007, Marthanda Varma claimed that the treasures of the temple were the family property of the royals. Several suits were filed objecting to this claim and a lower court in Kerala passed an injunction against the opening of the vaults.
- The Kerala High Court in the 2011 ruling passed an order that a board be constituted to manage the affairs of the temple, ruling against the royal family. The appeal against this verdict was filed by the royal family immediately and the SC had stayed the HC verdict.
- By appointing two amicus curiae- senior advocate Gopal Subramaniam and former Comptroller and Auditor General of India Vinod Rai to prepare an inventory of items in the vaults. While five vaults were opened of the six, vault B (Kallara B) was not opened.
- The royal family had claimed that a mythical curse is associated with the opening of vault B. Amicus Curie Report by Justice Gopal Subramaniam, in April 2014, has reportedly found two more further subterranean vaults that have been named G and H.
- The Padmanabhaswamy Temple is the wealthiest place of worship in the world. It is conservatively estimated that the value of the monumental items is close to ₹1.2 lakh crore or ₹1.2 trillion (US\$17 billion). If the antique and cultural value were taken into account these assets could be worth ten

times the current market price.

- The valuables are believed to have been accumulated in the temple over several thousand years, having been donated to the Deity (and subsequently stored there), by various Dynasties like the Cheras, the Pandyas, the Travancore Royal Family, the Kolathiris, the Pallavas, the Cholas and many other Kings in the recorded history of both South India and beyond, and from the rulers and traders of Mesopotamia, Jerusalem, Greece, Rome, and later, the various colonial powers from Europe, and other countries as well.
- Since 2011, the process of opening the vaults has led to the discovery of treasures within the Padmanabhaswamy temple, prompting a debate on who owns temple property and how it should be regulated.
- Despite being a secular country that separates religion from the affairs of the state, Hindu temples, its assets are governed through statutory laws and boards heavily controlled by state governments. This system came into being mainly through the development of a legal framework to outlaw untouchability by treating temples as public land; it has resulted in many legal battles.
- In its order, the Kerala high court had concluded that after the definition of 'Ruler' in Article 366 (22) of the Constitution of India was amended by the Constitution (Twenty Sixth Amendment) Act, 1971 – by which privy purses were abolished – the successor to the erstwhile royals could not claim to be in control of the Sree Padmanabha Swamy Temple.
- The HC had directed the state government to take steps to set up a body or trust to take control of the temple, its assets and management and to run the temple in accordance with the traditions.

### Supreme Court Verdict

- On July 13, the Supreme Court reversed the 2011 Kerala High Court judgement after they upheld the rights of the former royal family to run the administration of the famous Padmanabhaswamy Temple in Kerala.
- There were arguments regarding on whether the 26th Constitutional Amendment, which banished rulers and privy purses, would nudge the temple and properties into the hands of the State.
- By carefully examining the Travancore-Cochin Hindu Religious Institutions Act, 1950, the Supreme Court decided to allow the Travancore royal family to claim ownership and manage the ancient Sree Padmanabha Swamy Temple.
- The Supreme Court held that the definition of Ruler would apply for the purpose of shebait rights and would devolve to the successor. Justice Lalit held, "Shebaitship was always in the royal family and the Ruler represented the unbroken line of shebait," the judgment said. Shebaitship does not lapse in favour of the State by principle of escheat (reversion of property to the State).
- The court defined 'shebait' as the "custodian of the idol, its earthly spokesman, its authorised representative entitled to deal with all its temporal affairs and to manage its property". The court traced how the shebaitship descended from King Marthanda Varma, who rebuilt the temple and installed a new idol after a fire destroyed the temple in 1686.
- Along with the controlling rights, the Supreme Court also passed the ball in the court of the royal family to decide whether the mysterious vault be open or not.



- However, the royal family had argued against the opening of the secret vault or “kallara B” as they claim it would bring misfortune to the entire state.
- Accepting the royals’ submission that the temple is a “public temple”, the court issued a slew of directions for its transparent administration in the future.
- It directed the setting up of an administrative committee with the Thiruvananthapuram District Judge as its chairperson. The other members would be a nominee of the trustee (royal family), the chief thanthri of the temple, a nominee of the State and a member nominated by the Union Ministry of Culture. This committee would take care of the daily administration of the temple.
- It also ordered a second committee to be constituted to advise the administrative committee on policy matters. This would be chaired by a retired High Court judge nominated by the Chief Justice of the Kerala High Court. Both committees should start functioning within the next two months and an executive officer should be appointed without delay.
- The primary duties of the committees would be to preserve the treasures and properties. They would take a call on whether to open Kallara B, considered to be the richest among the temple vaults, for inventorisation.

## 12. Reliance Net- Debt Free

- What does it mean

### Why Discussing This Today

- Reliance recently declared itself net debt free.

### That means now Reliance has NO Debt?

- It does not mean that.
- Net debt refers to the amount of debt on the balance sheet after accounting for cash.

### What does it mean in Simple Words

- Net debt tells us whether a business has the money to pay off all its debt, if it becomes due immediately.
- Net debt is borrowings minus cash.
- Debt includes both short-term and long-term borrowings.
- Cash also includes marketable investments that can be converted to cash in quick time.
- When a business says it is net debt-free, that does not mean it has repaid all its borrowings.
- The debt is there but the business has cash equal to debt.
- So, net debt-free is not the same as zero debt.

### How it became Net Debt Free

The fund-raising included:

- Country’s largest rights issue

- A series of secondary stake sales in Jio Platforms (to various foreign tech giants like Facebook, Intel, Qualcomm, Google)
- Investment by Private Equity firms
- Investment by sovereign wealth funds such as KKR, TPG and Saudi Arabia's Public Investment Fund.
- Plans of investment by Saudi Arabian energy giant Aramco.

## 13. Trade Surplus after 20 years

### Why Discussing This Today

- For the first time since 2002, India's merchandise trade balance turned to a surplus of \$0.8 billion in June.

### What Caused the Surplus?

- Imports continued to decline at a faster pace
- Exports began to pick up.

### Why Exports are Picking Up

- Impact and the size of stimulus packages
- Faster reopening of global economies

### Why Imports are Not Picking Up

- They are an indicator of poor domestic demand.
- With low oil consumption and low oil prices
- Regional lockdowns in some Indian states
- Uncertain employment scenario

## A temporary surplus?

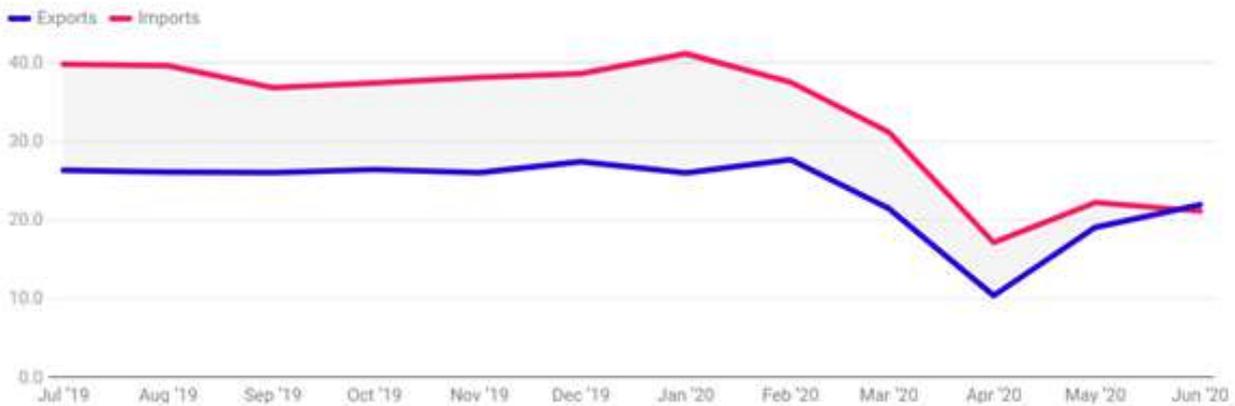
India's trade balance turned surplus in June, as imports remained in deep contraction and exports gathered steam.



Source: Ministry of commerce, Edelweiss Research

## India Records A Trade Surplus In June 2020

In \$ Billion



Source: PIB, Ministry of Commerce

Bloomberg | Quint

### Negative net debt (net cash)

Net debt defined (\$M)	
Short term interest bearing debt	5,000
Long term interest bearing debt	0
<b>Gross debt</b>	<b>5,000</b>
Less: cash and cash equivalents	20,000
<b>Net debt</b>	<b>(15,000)</b>
<b>Net cash</b>	<b>15,000</b>

### What all impacts will it have?

- It would provide some support to the depreciating Indian rupee.
- But this is not good for Exports.
- So, we can expect the RBI to intervene to avoid a sharp INR appreciation.

### Some Key Items to Know

#### Key Export Items

- Those that Rose:
  - ✓ Iron ore exports
  - ✓ Exports of oil seeds
  - ✓ Organic & inorganic chemicals
- Those that Contracted:
  - ✓ Gems & jewellery

- ✓ Leather & leather products
- ✓ Ready made garments

### Key Import Items

Those that Contracted:

- ✓ Gold imports
- ✓ Coal, coke and briquettes
- ✓ Petroleum, crude and by-products
- ✓ Machinery
- ✓ Electronic Goods

## 14.Jio 5G

### Jio's Plan

- Jio claims to provide a complete end-to-end 5G solution prepared by the company itself that is ready for deployment once the networks are in place
- Jio Platforms will be supported by Qualcomm, an American chipmaker company, to rollout advanced 5G infrastructure and services for Indian customers
- Additionally, with Google's partnership, Jio plans to develop affordable smartphones using an optimised Android-based operating system

### What is 5G?

- 5G or fifth generation is the latest upgrade in the long term evolution (LTE) mobile broadband networks
- The biggest difference between 5G and 4G is the speed
- 5G is expected to be 20 times faster and unlike on a 4G network, a larger array of devices can connect to the internet on a 5G network, like drones, cars and even refrigerators
- 5G will have faster speeds with latency down to between 1-10 milliseconds from 50 milliseconds for 4G
  - ✓ Latency is the time a device takes to communicate with the network
- It uses beam tracking to follow all devices on the network to ensure consistent connection in real-time for the device
- 5G networks are also designed to multiple-input multiple-output (MIMO) efficient which improves signal throughput for all devices on the network

### Evolution

- 1G: Allowed only mobile voice calls to be made
- 2G: Allowed mobile voice calls as well as sending of short text messages
- 3G: Allowed web browsing on mobile devices

- 4G: Improved speed and latency of browsing

### Spectrum Bands for 5G

- 5G networks chiefly operate on three spectrum bands
- Low-band spectrum: Great coverage and works fast even in underground conditions, but maximum speed limit is 100 Mbps
- Mid-band spectrum: Speeds are higher but limitations in coverage area and penetration of telephone signals in buildings
- High-band spectrum: Highest speed but extremely limited network coverage area and penetration capabilities. A number of smaller towers are required to ensure adequate coverage and high-speed performance.

### Gap between India and 5G

- Companies, both telecom service providers and their equipment vendors, have completed lab trails of 5G network components but are yet to commence field trials
- Telcos are waiting allocation of test spectrum from the Department of Telecommunications (DoT)

## 15. Why are floods essential for Kaziranga (Assam)?

### Kaziranga in Assam



## Floods in Assam



## Brahmaputra



## Let's see a Different View



### Role of floods in Kaziranga's ecosystem?

- The entire area of Kaziranga – formed by alluvial deposits from the Brahmaputra and its tributaries – is centred around the river.
- It is a riverine ecosystem, not a solid landmass-based ecosystem,” “The system won't survive without water.

### Advantages of these floods

- The regenerative nature of floods helps replenish Kaziranga's water bodies and maintain its landscape, a mix of wetlands, grasslands and semi-evergreen deciduous forests.
- The waters also help get rid of unwanted plants such as water hyacinth which collect in huge masses in the landscape.
- The floodwaters also function as a breeding ground for fish.
- In a herbivore-dominated area like Kaziranga, it is important we maintain its grassland status. If it were not for the annual floods, the area would become a woodland,
- Those floods are a way of natural selection. “A number of animals – especially the old, weak – cannot survive the floods. Only the ones with superior genes survive.

## Water Hyacinth



### Are floods become problematic for Kaziranga?

- Earlier, a big flood would come once in ten years - Now, they happen every other year,”
- Reasons :
  - ✓ Massive deforestation in catchment areas
  - ✓ Release of waters by dams upstream may be contributory factors.

### Floods in Assam

- Natural Reasons
- Manmade reasons



### Result

- Animals adapt naturally to floods but when the waters hit a certain level, they gravitate towards safer, higher ground in the Karbi Anglong hills. While in the past, Kaziranga and Karbi Anglong were part of the same landscape, the animals now have to cross the bustling National Highway 37 which cuts across the park.
- As a result, animals that venture out of the park, die either under the wheels of speeding vehicles on the highway, or are killed by poachers who take advantage of their vulnerability

- Fleeing floodwaters, animals stray from the boundary of the park, and there is an increased interaction between humans and wildlife, at times leading to conflict. --- MAN ANIMAL CONFLICT

## Karbi Anglong

### Kaziranga in Assam

#### How helpful are Kaziranga's artificial highlands?

- Over the years, another mitigation measure has been artificial highlands (111 in the Nineties, 33 in 2016-17) built inside the park for wild animals to take refuge in during the flood.
- Some animals do not take to the highlands naturally. "They have been migrating to natural highlands of Karbi Anglong for centuries; suddenly these artificial constructions do not inspire confidence, they do not find it secure.
- Animals do take refuge there – especially rhino and swamp deer – but it is not viable to build more highlands since such constructions will ruin the natural ecosystem.



## What measures are taken to prepare for the flood?

- The authorities keep a track of updates from the Central Water Commission, and monitor water levels of the Brahmaputra tributaries upstream in Arunachal Pradesh.
- The civil administration, park authority, NGOs, and local communities work together to tackle the floods. “To avoid disease outbreaks, a door-to-door vaccination is organised every year pre-floods,
- Camps are organised to create awareness against poaching and harming wild animals that are rendered vulnerable during the floods.”
- When the floods hit, Section 144 (Unlawful assembly) is imposed along NH-37, speed limits are enforced and fines levied.
- Barricades are also placed to help animals cross over to Karbi Anglong.

## So what has been the solution till now?

- Experts believe that emphasis needs to be put on securing animal corridors and ensuring a safe passage to the Karbi hills.
- In April 2019, the Supreme Court banned all types of mining and related activities along the park’s southern boundary and in the entire catchment area of the rivers that originate in the Karbi Anglong hill ranges and flow into Kaziranga, as well as new construction activities in private lands on nine animal corridors.

## 16.The Story behind Masjid Mubarak Begum

### Masjid Mubarak Begum

- Masjid Mubarak Begum, a striking structure in Old Delhi built in 1822 as the palace and later the dome of a courtesan who went by the name Mubarak Begum, suffered considerable damage early Sunday morning due to torrential rain and lightning.
- Of the three domes on the red sandstone mosque, the one in the centre broke and turned to rubble.
- Live monuments such as temples and mosques are not considered under the protection of the Archaeological Survey of India (ASI).

### Mubarak Begum

- Mubarak Begum was an ambitious, influential woman married to the British Resident of Delhi, David Ochterlony.
- She was the senior most partner/concubine of the elderly Sir David Ochterlony and built a glorious double-storeyed mosque in the Hauz Qasi area of old Delhi.
- While Ochterlony is known to have had 13 concubines or wives, one of them, Mubarak Begum, clearly appeared to have been most favoured.
- Formerly a Brahmin girl from Pune, Mubarak converted to Islam, and in Ochterlony’s will she was referred to as ‘Beebee Mahruttun Moobarukh ul Nissa Begume, alias Begum Ochterlony, mother of my younger children’. Locally, she was well known as ‘Generalee Begum’.
- She served as a courtesan in the Mughal Court before becoming Ochterlony's partner.



- Ochterlony was appointed Resident at Delhi in 1803. He loved, adopted and embraced the Indo-Persian culture of 19th century Delhi
- Ochterlony loved her nevertheless and built her several shrines to prove his devotion including the Mubarak Bagh.
- With the death of Ochterlony, she then remarried Wilayat Ali, a Mughal soldier.
- Ali became the captain of the royal troops during Bahadur Shah Zafar's reign.
- All the royal appointees had to provide a 'nazrana' or a security deposit when they took up any post. Having inherited quite a lot of wealth from her first husband, it was Mubarak who provided the money and got him the post
- Her Haveli remained a place of high Mughal culture & here Fahatullah Baig set The Last Mushairah of Dehli.
- In the last two centuries, the mosque came to be refurbished with a youthful look of rust red.
- The Masjid Mubarak Begum is the only one that boasts to have been created by the Indian 'begum' of a British Resident.
- Mubarak Begum died in 1878 and the mosque was taken over by the British government. It was restored for the first time in 1898.
- As per the records of the archaeologist Maulvi Zafar Hasan, Mubarak Begum built the mosque in Hauz Qazi in 1822-23 and named it after herself.
- The courtesan fell from grace when she started getting airs about being the partner of Ochterlony and wanted be called "Lady Ochterlony"
- She offended the British by calling herself 'Lady Ochterlony', and also offended the Mughals by awarding herself the title Qudisia Begum, previously that of the emperor's mother
- Further, since she was a dancing girl in the past, no respectable Mughal would be seen entering the mosque built by her. Consequently, it acquired the epithet, 'Rundi ki masjid' (prostitute's mosque)\*, which continues to be in use till date.

### Stories of those times

- Today's Chawri Bazaar was once Bazaar-e-Husn (Market of Beauty). This was when Old Delhi was Shahjahanabad.
- Shah Jahan may not have anticipated the Taj Mahal will be seen as a wonder in the future. Like rulers of his time, he believed a ruler's legacy must be a great city.
- So he planned Shahjahanabad on professional lines, representing every best occupation in the world.
- Initially, no lane was allocated to entertainers, but later it occurred to him that he can't have a great city without entertainment.
- So the lane's ground floor was lined with shops selling all kinds of wares—and entertainers were put up on the first.
- When the Mughals entered India, they had dominis and lolonis to entertain the army; our dancers were devadasis.

- The Mughals loved their music and dance. Therefore they sent for dancers and musicians from Persia and Central Asia. These dancing girls were known as: Dominis, Hansinis, Lolonis, and Hourkinis. All of them had their distinctive style of dancing
- Mughal dancers got paid for performances, but unlike devadasis, never got invited to perform in public as their dance was erotic. Intermingling changed this.
- When dominis–lolonis met our devadasis, they were awed by the subtlety of our temple dancer's movements, and their expressive hand and eye gestures. Gradually, a fusion form emerged–kathak!
- Until Shahjahanabad was formed, travelling troupes of kathakars performed all over India. This was the first time a permanent space was created for entertainers.
- But every dancer wasn't skilled enough to combine the devdasi's grace and ghungru with Mughal dancers' swift movements, resulting in a hierarchy.
- At Bazaar-e-Husn, the hierarchy was visible through accommodations.
- At one end there were kotharis (small cells) for bednis (prostitutes).
- A rank above were dominis, who performed a loose form of kathak, offering titillation to soldiers and middle-ranking officers.
- Further up were masters of kathak, who enthralled with dazzling turns aka tawaf (meaning circumambulation in Persian). That's how dancers who could do it came to be called tawaifs. They lived in big apartments called kothas.
- Every evening, it saw a gathering of the city's elite, nawabs and aficionados of high art.
- Every day, tawaifs spent hours in riyaz and grooming to put up a grand spectacle.
- Highest in the order were Randis—yes, the derogatory R-word. But in Husn-e-Bazar randis were the city's divas—not only skilled in dance, but also singing, conversation and poetry.
- The city's whos-who lined-up to seek their company. Their manner was so refined, they ran grooming centres of sorts; young nawabs were sent to them to learn the art of conversation.
- Always surrounded by the powerful, randis knew the city's secrets. Therefore, the rich visited them also to keep an ear to the ground.
- Their large kothis (multi-storeyed homes) with courtyards showed their stature and they only occasionally did public performances.
- Randis chose and refused admirers as they liked.
- They weren't looked down upon, but flaunted by men who entered long-term relationships with them.
- When the British entered with East India Company, they made it compulsory for army men to bring their wives, or marry natives (temporarily).
- No Indian families would've agreed, so these ladies were their only recourse.
- It was Delhi's first British resident, David Ochterlony, who married Mubarak Begum and built a mosque in her honour.
- For the first time, a nautch girl, not royalty, had commissioned a mosque and so Randi ki Masjid became the informal name.

- The 1857 sepoy mutiny changed everything. British analysis blamed the event on “officers indulging too much in Indian culture and forgetting their ‘Christian values’”.
- It’s said the real reason behind the anti-nautch campaigns launched by missionaries was the British desire to usurp property—tawaifs and randis were targeted as they belonged to the highest tax bracket and lived in huge homes in the best localities.
- The British formed red-light districts. Women with talent would’ve refused to move, yet many got forced. They were now shamed rather than flaunted.
- And randi, which merely meant woman, wife or widow as per old Hindi or Urdu, over time became an abuse.
- Nautch girls who survived the banishment now performed for smaller rajas.
- When radio emerged, things looked up again.
- The British wanted women who sang well to fill gaps between the war announcements.
- The public heard tawaifs for the first time as nautch girls previously only performed for gatherings of the wealthy.
- The masses were so enamoured by Calcutta’s Gauhar Jan’s voice that she went on to record songs in several languages and became ‘India’s Gramophone Queen’”
- Soon, nautch girls began getting offers from natak mandalis and later, movie-makers, changing the age-old tradition of men cross-dressing to play women’s roles.
- Initially, many of Bollywood’s ladies came from the tawaif tradition; also why till the 1940s and ‘50s they weren’t looked at kindly.
- Naseeman Banu (mother of Saira Banu) had a kotha in old Delhi. Nargis’s mother, Jaddan Bai, descended from this tradition too and although there’s no evidence, people believe so did Madhubala.

## 17. India’s Chabahar investment held hostage to US and China?

- What happened to the Chabahar- Zahedan railway line?



## Why is Chabahar important?

- The Shahid Beheshti Port at Chabahar is located on the Makran coast of Sistan and Baluchistan Province, next to the Gulf of Oman and at the mouth of Strait of Hormuz.
- As per Dr. Sudha Ramachandran, it is the only Iranian port with direct access to the Indian Ocean.
- The Port is "Golden Gate" to land-locked countries of Afghanistan, Turkmenistan, and Uzbekistan etc.
- The Chabahar trade zone could be an important weigh station for India's energy imports and food and material exports coming from Kandla and Mundra ports.
- Counter China's growing presence in the Indian Ocean and especially its ties with Pakistan at the Gwadar Port.
- Pakistan's Chinese-funded deep sea port at Gwadar is also on the Makran coast. Gwadar is located on the Gulf of Oman, close to the entrance of the Persian Gulf.
- Until 1958 it belonged to Oman, which gave this land to Pakistani rulers who expected that the location would contribute to what Kaplan calls "a new destiny."
- Christopher Jafferlot point two main advantages to China:
  - ✓ It will provide Beijing with, first, a listening post from where the Chinese may exert surveillance on hyper-strategic sea links as well as military activities of the Indian and American navies in the region.
  - ✓ Secondly, it provides dual-use civilian-military facilities providing a base for Chinese ships and submarines.
- Importantly, the Gwadar helps China counter its Achilles heel in the Strait of Malacca.



- The motive of the development of Gwadar Port by China is to avoid the choke point of the Strait of Malacca in case of naval blockade, in addition to accessing Central Asia through the development of the Gwadar as the Silk Road Subway Antenna.
- India's natural position in the Indian Ocean, with basing capabilities in the Andaman and Nicobar Islands at the mouth of the strait, would allow its navy to cut it off in the event of a crisis or war with China.
- Indonesia permitted India to invest in Sabang Port, which is located near the strategic and vital shipping channel – the Strait of Malacca.

### What is the issue?



- The issue is with regard to railway line from Chabahar port to Zahedan on the border with Afghanistan which was inaugurated on July 7 of which India was not a part, despite a previous 2016 MoU between Iranian railway infrastructure company CDTIC and Indian railway construction company IRCON.
- State-owned Ircon International Limited (IRCON) was associated with the rail project even as India acted quickly to develop Chabahar port facilities.
- Over the years, the Chabahar project has grown, and now envisages a port, a free trade zone, the 628-km railway line to Zahedan, and then the little over 1,000-km track to Sarakhs on the border with Turkmenistan.
- Suhasini Haider writes that in the last five years, the railway line languished. After several threats and appeals to India, Iran said it was moving ahead to build the Chabahar-Zahedan line on its own this month, with approximately \$400 million from the National Development Fund of Islamic Republic of Iran.

## The US Angle

- India's investment in Chabahar has always been held hostage to international policy shifts on Iran. U.S. policy in particular has swung wildly in the last two decades. It placed heavy sanctions on Iran until nuclear talks between the P-5+1 (the U.S., the U.K., France, China, Russia and Germany) that began in 2006, ended successfully with the signing of the Joint Comprehensive Plan of Action (JCPOA) in 2015.
- The two sides had signed a MoU to work together on the Chabahar-Zahedan railway link project. However, a formal agreement has not come through as India objected to certain entities that Tehran wanted to be a part of the construction project.
- These entities include a Khatam al-Anbiya construction which belongs to Iran's Islamic Revolutionary Guard Corps (IRGC) - one of the entities proscribed by the United States of America. These entities are part of US's secondary sanctions.
- Under the US sanctions, countries cannot work with a designated entity in Iran even if it is for certain development projects that enjoy waiver from the US scrutiny. The Chabahar port and the Chabahar-Zahedan rail link -- critical route to connect with Afghanistan bypassing Pakistan - have that waiver.

## India's loss is China's gain?

- The Ministry of External Affairs (MEA) has disclosed that India's ONGC Videsh Ltd (OVL) has been cut out of the development of an Iranian gas field project, Farzad B; both sides had been in talks since 2009.
- The project, which will now go to an Iranian company, had also floundered due to a combination of U.S. sanctions, Iran's changing conditions and fluctuating prices, as well as India's delayed responses.
- The announcements on the two projects come even as news filters in of a China-Iran 25-year partnership for \$400 billion to build infrastructure and energy resources in Iran, giving the impression that Iran may be relying more and more on Beijing.
- Importantly China also has the technology and appetite for oil that Iran needs. Recently, the two countries struck a three-year \$3.39 billion deal to produce liquefied natural gas in Iran's mammoth south Pars natural gas field.

## Balancing Iran with Arab world

- According to C. Raja Mohan, India needs to balance its relations with the Arab world which outweigh the realisation it has seen in Iran.
- According to Raja Mohan, millions of Indian immigrants in the Arab nations, massive hard currency remittances from them and the density of commercial engagement with the Arab Gulf outweigh the relationship with Iran.
- He argues that loss of railway contract is part of risk of doing business in other countries. Further, sanctions regime imposed by the US has crippled the Iranian economy. It also targets third countries that do business with certain Iranian entities.
- Meanwhile, the Arab world has had its doors open for political, economic and technological cooperation with India. Three moderate Arab nations – Egypt, Saudi Arabia and the UAE – are confronting radical forces in the region and are valuable partners for India in countering forces of destabilisation.

- Recently, the UAE launched the first home-grown Arab space mission from a Japanese rocket. The UAE's space programme is only a reflection of the emerging sentiment among the Gulf Arabs to reduce the over-dependence on oil, promote alternative energy sources, invest in higher education, and develop technology hubs. This provides a solid basis for elevating India's economic partnership with the Arab world to the next level.

## 18. Everything about all the corona vaccines

### Important things we'll see today

- Why discussing vaccines today
- Types of Vaccines
- Vaccine - From Lab to Us
- Important Vaccines in the race and their mechanism

### Why Discussing This Today



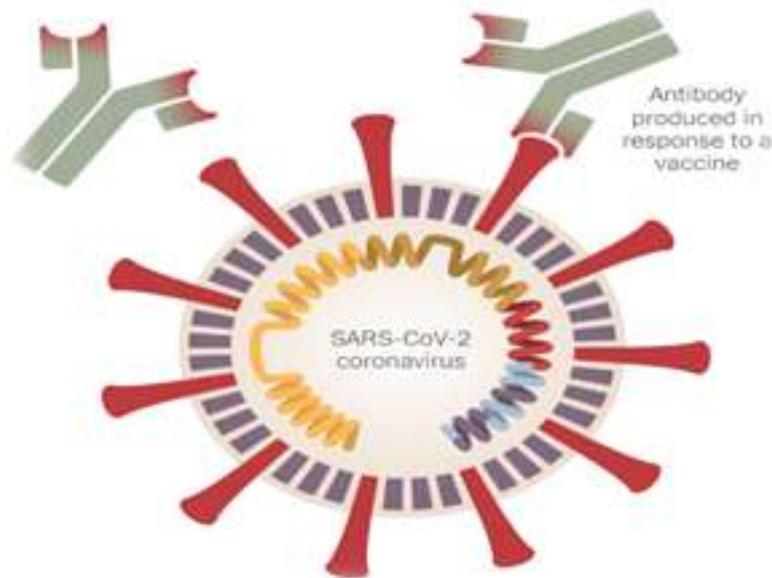
- More than 150 vaccines in race
- Around 15 in Human Trials Phase-1
- Around 11 in Phase-2 (tested on all age groups and diverse populations)
- 4 in Phase-3 (mass vaccinations)
- Phase-4: Approvals by world's regulators

### Important Vaccines

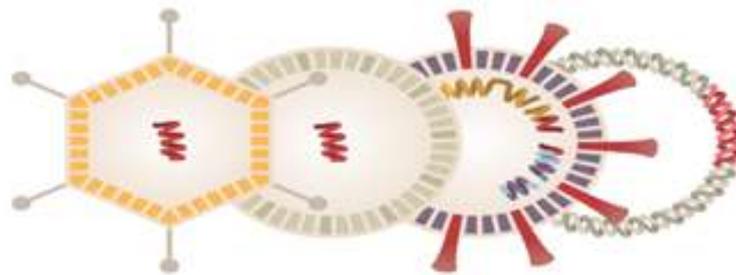
- Moderna's: USA based. mRNA-1273
- Oxford's: With AstraZeneca:
- Twin Response Seen: Antibodies and T-cells
- Russia: 2-Years of Immunity
- Bharat Biotech and ICMR: CoVaxin (Phase-1)
- Another Indian Vaccine in the race: ZyCoVd

### In short, what do Vaccines do?

- Vaccines work by exposing the immune systems to components of a virus – the coronavirus spike protein.
- It is done with the hopes of provoking a reaction against a real infection in the future.



*The development cycle of a vaccine, from lab to clinic.*



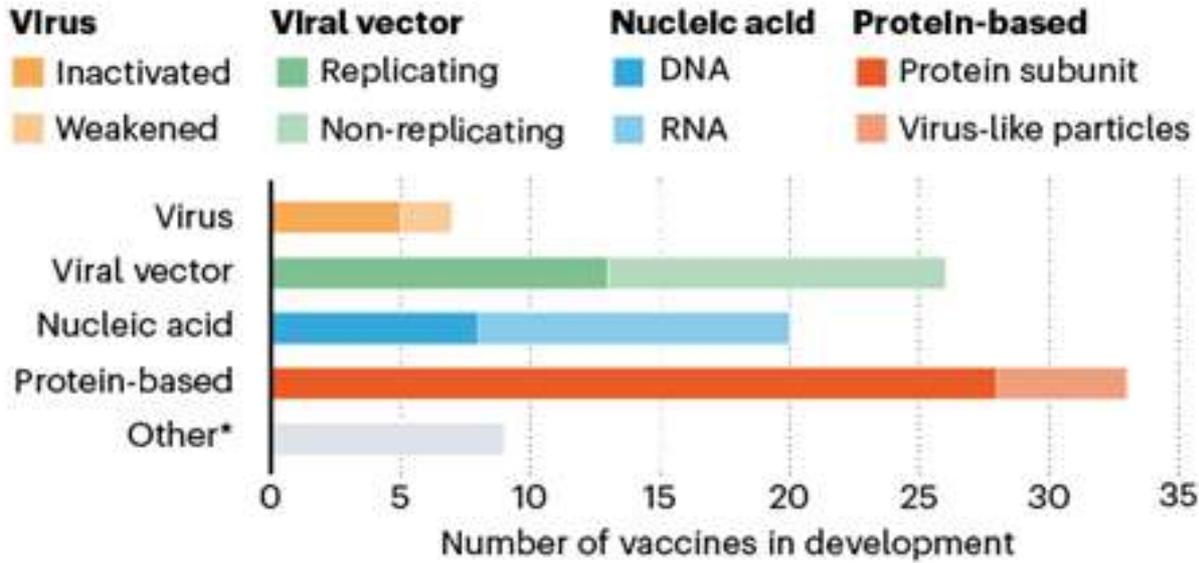
## What is /are the aim / aims when we develop a Vaccine?

- The vaccine aims at two broad types of immune responses:
  - ✓ Antibody molecules made by the body that can recognize and, in some cases, inactivate viral particles
  - ✓ T-cells that can kill infected cells as well as promote other immune responses including antibody production.

## Types of Vaccines

- Whole Virus: Attenuated or inactivated Virus (India's)
- Viral Vector: Oxford's Vaccine
- Nucleic Acid: Moderna's Vaccine
- Protein Based: Protein of Virus
- Repurposed Vaccines: Made for some other disease but used for Corona as well

## AN ARRAY OF VACCINES



\* Other efforts include testing whether existing vaccines against poliovirus or tuberculosis could help to fight SARS-CoV-2 by eliciting a general immune response (rather than specific adaptive immunity), or whether certain immune cells could be genetically modified to target the virus.

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## Virus Vaccines

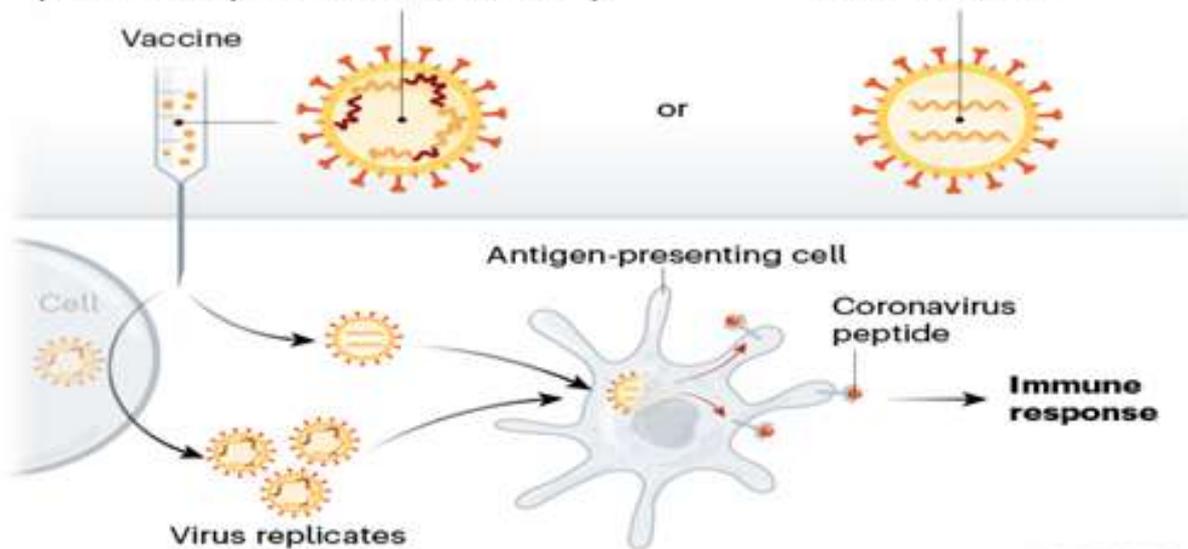
### VIRUS VACCINES

#### Weakened virus

A virus is conventionally weakened for a vaccine by being passed through animal or human cells until it picks up mutations that make it less able to cause disease. Codagenix in Farmingdale, New York, is working with the Serum Institute of India, a vaccine manufacturer in Pune, to weaken SARS-CoV-2 by altering its genetic code so that viral proteins are produced less efficiently.

#### Inactivated virus

In these vaccines, the virus is rendered uninfected using chemicals, such as formaldehyde, or heat. Making them, however, requires starting with large quantities of infectious virus.



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## Viral-vector vaccines

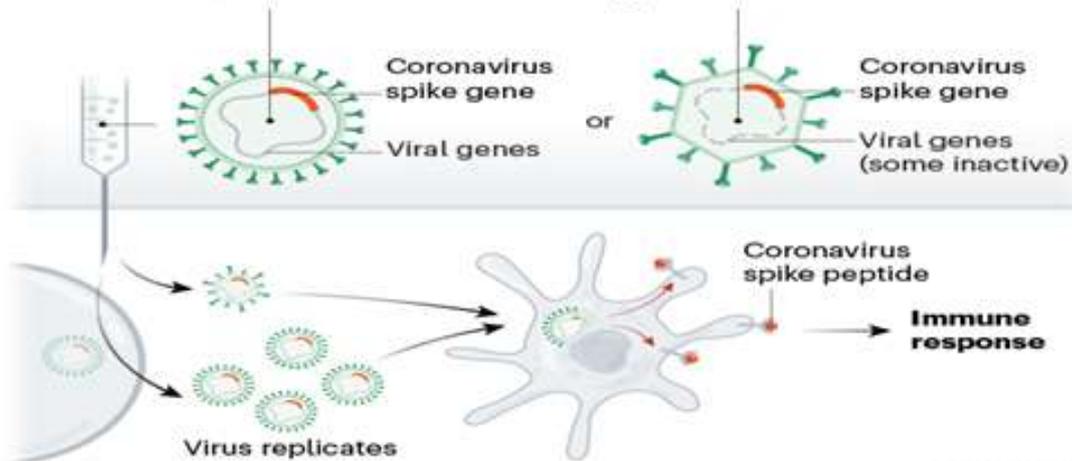
### VIRAL-VECTOR VACCINES

#### Replicating viral vector (such as weakened measles)

The newly approved Ebola vaccine is an example of a viral-vector vaccine that replicates within cells. Such vaccines tend to be safe and provoke a strong immune response. Existing immunity to the vector could blunt the vaccine's effectiveness, however.

#### Non-replicating viral vector (such as adenovirus)

No licensed vaccines use this method, but they have a long history in gene therapy. Booster shots can be needed to induce long-lasting immunity. US-based drug giant Johnson & Johnson is working on this approach.



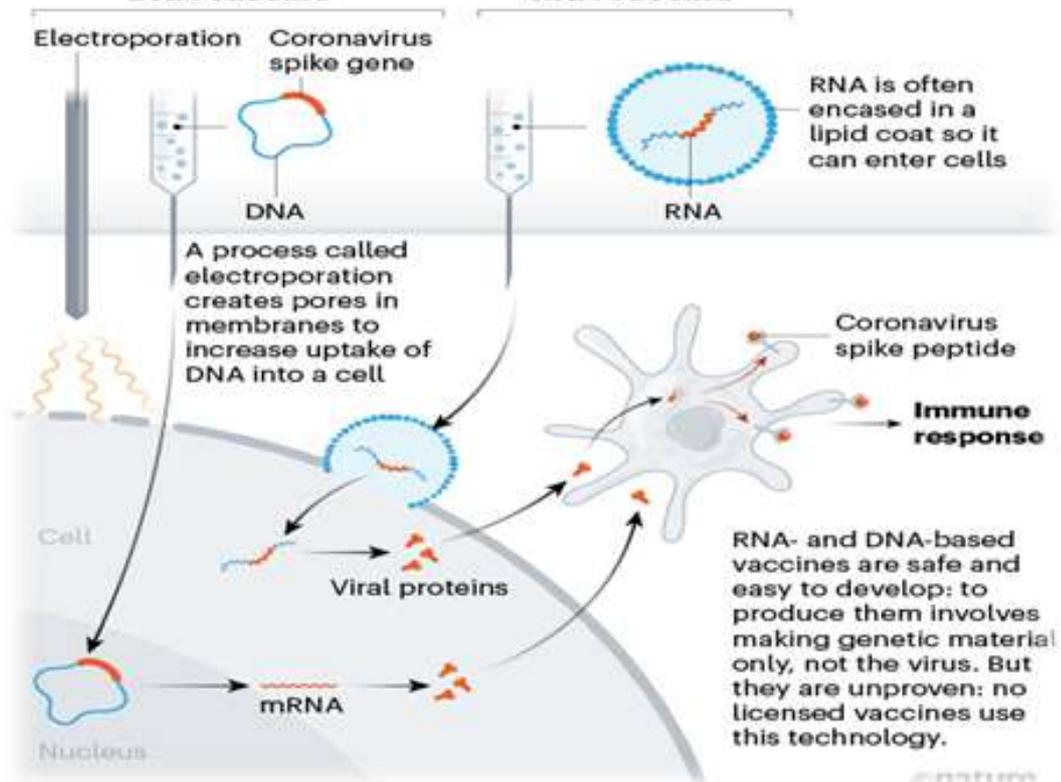
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## Nucleic-acid vaccines

### NUCLEIC-ACID VACCINES

#### DNA vaccine

#### RNA vaccine

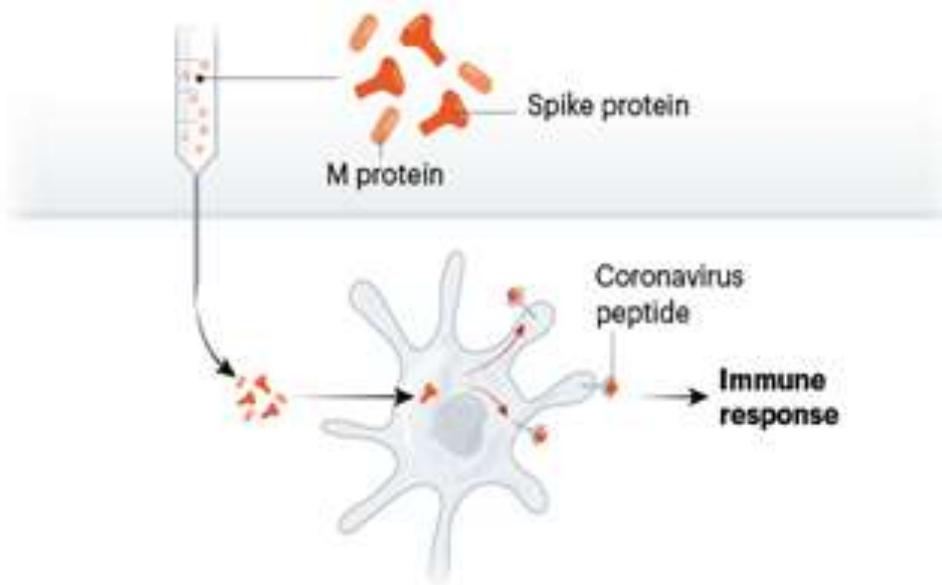


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## Protein-based vaccines

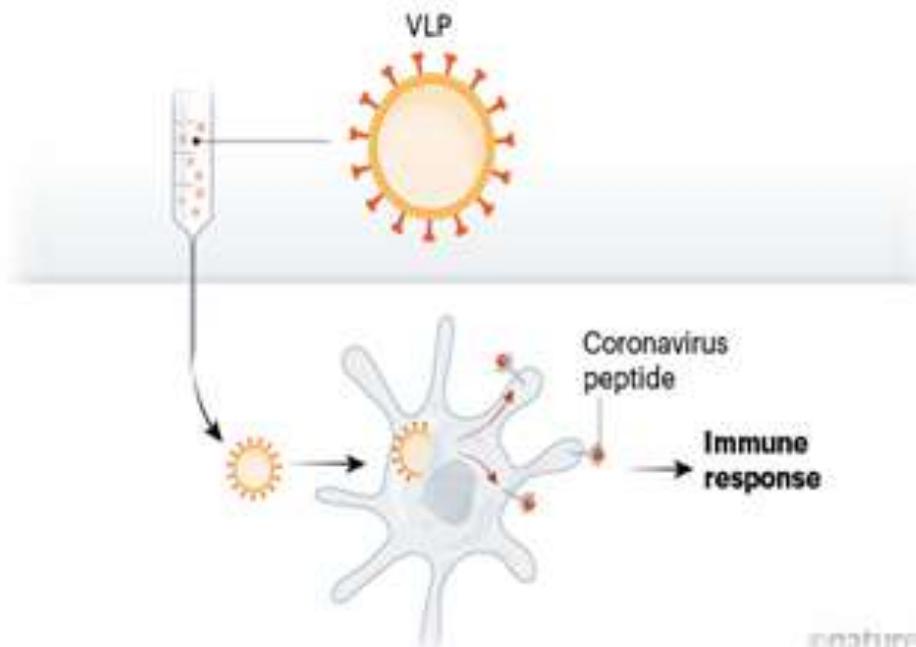
### Protein subunits

Twenty-eight teams are working on vaccines with viral protein subunits — most are focusing on the virus's spike protein or a key part of it called the receptor binding domain. Similar vaccines against the SARS virus protected monkeys against infection but haven't been tested in people. To work, these vaccines might require adjuvants — immune-stimulating molecules delivered alongside the vaccine — as well as multiple doses.



### Virus-like particles

Empty virus shells mimic the coronavirus structure, but aren't infectious because they lack genetic material. Five teams are working on 'virus-like particle' (VLP) vaccines, which can trigger a strong immune response, but can be difficult to manufacture.



## The Vaccine Testing Process

**PRECLINICAL TESTING** : Scientists give the vaccine to **animals** such as mice or monkeys to see if it produces an immune response.

**PHASE I SAFETY TRIALS**: Scientists give the vaccine to a small number of people to test

**PHASE II EXPANDED TRIALS** : Scientists give the vaccine to **hundreds of people** split into groups, such as children and the elderly, to see if the vaccine acts differently in them. These trials further test the vaccine's safety and ability to stimulate the immune system. In June, the F.D.A. said that a coronavirus vaccine would have to protect at least 50% of vaccinated people to be considered effective.

**PHASE III EFFICACY TRIALS** : Scientists give the vaccine to **thousands of people** and wait to see how many become infected, compared with volunteers who received a placebo. These trials can determine if the vaccine protects against the coronavirus.

**APPROVAL** : Regulators in each country review the trial results and decide whether to approve the vaccine or not. During a pandemic, a vaccine may receive emergency use authorization before getting formal approval.

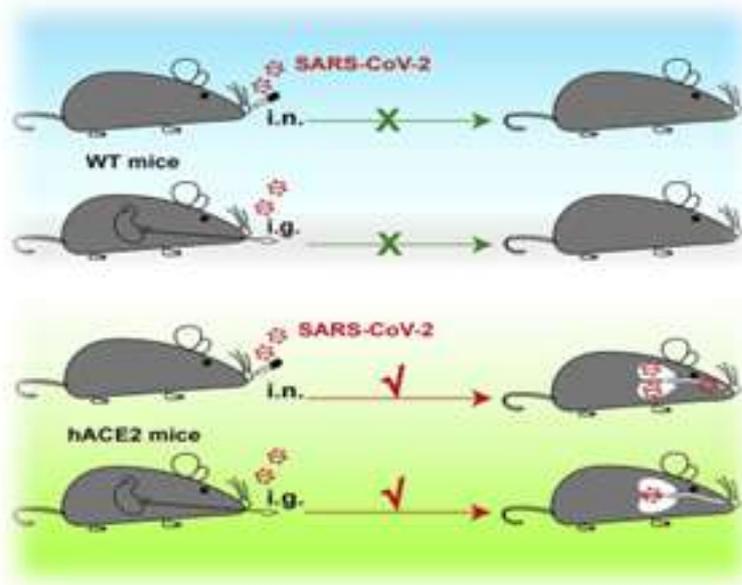
## COVAXIN™

- Bharat Biotech developed it together with the Indian Council of Medical Research (ICMR) and the National Institute of Virology (NIV), Pune.
- The company had also received permission from the Drug Controller General of India (DCGI) to begin human trials.
- Covaxin is an inactivated vaccine developed from an Indian strain of the novel coronavirus isolated by NIV.

## Some Concerns about COVAXIN™

- According to The Wire:
  - ✓ ICMR transferred the strain NIV had isolated to Biotech Bharat on May 9.
  - ✓ The company published its press release on June 29.
  - ✓ So there were only 50 days in between, during which time the company should have developed the inactivated vaccine, conducted preclinical animal trials (with mice and hamsters, according to the company), and sent its reports to be evaluated and approved by DCGI.
- Animal trials with mice typically take at least three months to conclude.
- Animal trials for COVID-19 can only be conducted with hACE2 transgenic mice, as 'normal' mice can't get infected with the novel coronavirus.

- These mice need to be shipped from the US, Europe or China.



## About Bharat Biotech

- Bharat Biotech is a reputed drug manufacturer that delivers four billion doses around the world for infections like rotavirus, hepatitis, Zika, Japanese encephalitis and others.

## MODERNA's Vaccine

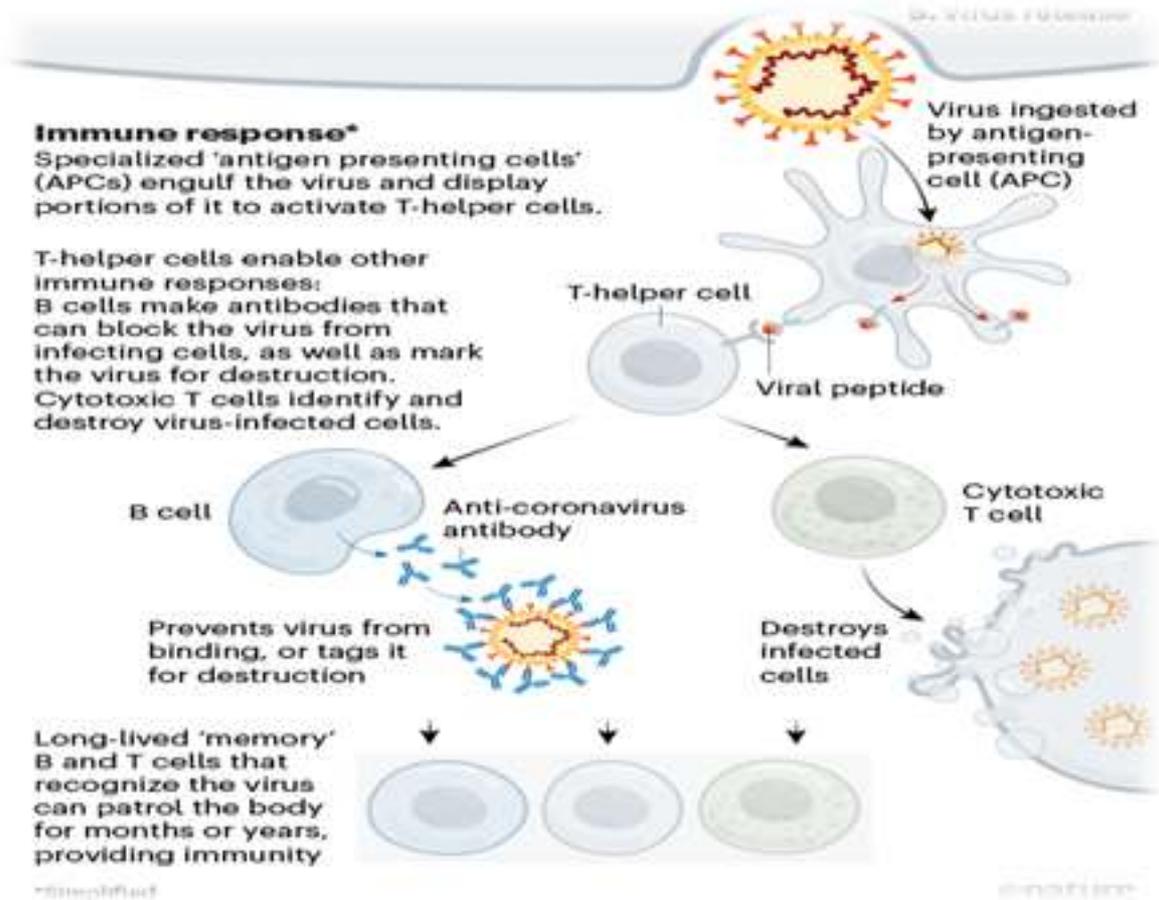
- They are injecting coronavirus RNA (its genetic code).
- It then starts making viral proteins in order to trigger an immune response.

## Oxford's Vaccine

- The vaccine is called ChAdOx1 nCoV-19.
- It is made from a genetically engineered virus that causes the common cold in chimpanzees.
- It has been heavily modified, first so it cannot cause infections in people and also to make it "look" more like coronavirus.
- Scientists did this by transferring the genetic instructions for the coronavirus's "spike protein" - the crucial tool it uses to invade our cells - to the vaccine they were developing.
- This means the vaccine resembles the coronavirus and the immune system can learn how to attack it.

## What are antibodies and T-cells?

- Antibodies are only one part of our immune defence.
  - ✓ Antibodies are small proteins made by the immune system that stick onto the surface of viruses.
  - ✓ Neutralising antibodies can disable the coronavirus.
- T-cells, a type of white blood cell, help co-ordinate the immune system and are able to spot which of the body's cells have been infected and destroy them.
- An effective vaccines induce both an antibody and a T-cell response



## 19. "Change in Mindsets" Women Permanent Commission Approved

### Why Discussing This Today

- Permanent commission to Short Service Commissioned (SSC) women officers in all 10 streams of the Indian Army.

### Supreme Court had said

- There is a "need for change in mindsets to bring about true equality in the Army"

### Before the judgement

- Women in the Army were allowed permanent commission in only a few services.
- For the other services, they were forced to leave the SSC after finishing a maximum tenure of 14 years.

### Important things to Know

- All women serving as SSC are now entitled to opt for PC.
- That is, they are qualified for permanent commission as much as all male SSC officers are entitled to opt for the PC.
- Applies to women in all services of the Army – no exceptions.

- Officers, who have been serving and completed more than 14 years of service, can now serve until 20 years and retire with full pension benefits.
- Those who served 20 or more years, whether or not they got a PC, will be entitled to pension benefits.
- Command is now open to women officers – this doesn't necessarily mean commanding to fight battalions, but that women can rise to the colonel level.
- A command can also be of a non-fighting unit.

### **An important number to Know**

- There are total of 1,653 women officers which is a miniscule 4 % of the total strength of commissioned officers in the Army

### **10 streams of the Army**

- The order specifies the grant of PC to SSC women officers in all the 10 streams of the Army in which they presently serve:
  - ✓ The Army Air Defence (AAD)
  - ✓ Signals
  - ✓ Engineers
  - ✓ Army Aviation
  - ✓ Electronics and Mechanical Engineers (EME)
  - ✓ Army Service Corps (ASC)
  - ✓ Army Ordnance Corps (AOC)
  - ✓ Intelligence Corps
  - ✓ Judge and Advocate General (JAG)
  - ✓ The Army Educational Corps (AEC)

### **Why still no command position?**

- The government cited “physical” and “physiological limitations” in granting command positions to women officers.
- Supreme Court had said there was need for administrative will and “change of mindset.”

### **Getting into the details**

- Women's careers can be furthered only if they get what are called command assignments or criteria appointments.

### **What is a criteria appointment**

- The Indian Army is what is called a command-oriented Army.
- That is, anyone who has to be given further positions up the chain of command has to first be experienced in command at the level of a full Colonel, a unit command.
- So far, this was denied to women.

- That was the main issue.

### Some important inputs

- Women officers, unlike their male counterparts, were not mandated to undergo the "junior command course" and other "adjunct courses" as young captains or majors to be eligible for "command appointments" till now.
- Women, of course, are not allowed to join main combat arms like infantry, mechanized infantry, artillery and armoured corps in the Army.
- They also cannot serve on board warships and submarines in the Navy.
- But the IAF, which already had women transport aircraft and helicopter pilots, has commissioned eight women as fighter pilots since 2016 to break yet another glass ceiling.

### Things which will be debated

- Central government's move to make the Battle Physical Efficiency Test (BPET) mandatory for all women officers, including those commissioned before 2009 and above 35 years of age, who were earlier exempt from it.
- (The BPET is a series of tests meant to test the physical fitness of an officer or a jawan to perform military tasks.)
- Reports indicate that senior women officers have been asked to do junior command courses, which are for officers with 5-13 years of service, to train them for junior command appointments in the Army.
- The BPET course was made compulsory 1998 onwards, but women officers of the 1994 batch have now been detailed for that, despite the fact that male officers of the same batch have not done it.
- The grant of permanent commission is dependent on the:
  - ✓ Annual confidential report (ACR) in the first 10 years of service
  - ✓ A 'Shape 1' medical category
  - ✓ Discipline
  - ✓ Vigilance clearance.
- It is said that out of the 620 women officers awaiting a board, 100 women with downgraded medical categories and have been detailed for the JC course.
- Women officers have been asked to go for another 'adequately exercised (AE) tenure', despite many of them having completed it in their years of service.
- (Every officer has to undergo 'AE tenure' of minimum 24 months to prove that he/she is fit for handling command appointments, and the weightage of AE tenure in ACR is 50 marks)
- Women officers have tenanted 48 to 60 months of AE appointments against 24 months, which has not been endorsed in their ACRs and now when they are due for promotion they are being asked to undergo a new AE to delay their board by another two years.



- There is still no induction of women in the Army below the rank of jawans (presently can only be a part of Military Police)
- The panel which studied it has no representation of women.

### Some inspiration to follow

#### Generals, in retrospect, would you have taken orders from a woman officer?

**Lt Gen Hasnain:** Without blinking an eye, if someone above me, whether man or woman, was someone who demonstrated capability and leadership qualities, there is no question that I would not accept directions, orders. In the Army, we are trained to do that. It's just a mindset [regarding women], we need to overcome that. I would have overcome it almost immediately.

**Lt Gen Hooda:** Soldiers respect professionalism, good leadership, irrespective of whether it is demonstrated by a male or female officer.

## 20.The Governor

### Not Governor's Powers

- The Governor has no power to unilaterally summon an Assembly session unless the government has, in his view, lost its majority
- He cannot take steps relating to disqualification of the Speaker
- He is barred from unilaterally sending messages to the Assembly on any matter

### Mahatma Gandhi on Governors

- "It would be bad economy to do away with provincial Governors and regard Chief Minister as a perfect equivalent. Whist I would resent much power of interference to be given to Governors, I do not think that they should be mere figureheads. They should have enough power enabling them to influence ministerial policy for the better. In their detached position they would be able to see things in their proper perspective and thus prevent mistakes by their cabinets. Theirs must be an all-pervasive moral influence in their provinces"

### The Focus Elements in the Office

- Interference versus influence
- Detached position versus figurehead
- Perspective versus prejudice
- All-pervasive moral influence

## Importance of the Office

- Governors and for that matter President of India are vital, not because they can hold up or hold back anything, but because they can and should exert the moral voltage, the sense of the rightness and wrongness of things that would underscore the republican credence and democratic credentials of elected governments
- Chief Ministers and Prime Ministers head the government. Governors and Presidents head the state. Governments govern, states sustain. And in a democratic republic, the people power both. They do so, wanting the Chief Minister to act conscientiously and the Governor to act constitutionally, to ensure self-government is good government, swa-raj is also su-raj

## Criticism

- Kapil Sibal said in context of Rajasthan Governor that Governors are no longer protectors of the rule of law, but they are protectors of the party in power
- Using a pliant Governor to undermine a State government or engineer a legislative majority is an old and secular trick used by all parties at the Centre

## Conclusion and Way Forward

- The Governor's role as a link between the State and the Centre shall not be an imperial one. The office of the Governor must be a dialogic and consultative one
- Women and men in education, commerce, administration, science, medicine, law and public life within and outside of politics, across parties, can surely be found who, as well-wishers, will strengthen and not threaten elected governments working 'for the better'.

## 21. African swine fever

### Let us start with a Question

Answer the following in context with African swine fever:

1. It does not affect humans directly but they can act as carriers of the virus.
  2. Its symptoms are similar to classical swine fever but both are caused from different viruses.
- A. Only 1  
B. Only 2  
C. Both 1 and 2  
D. Neither 1 nor 2

### What is African swine fever virus?

- African swine fever virus (ASFV) is a large, double-stranded DNA virus in the Asfarviridae family.
- It is the causative agent of African swine fever (ASF).
- The virus causes a hemorrhagic fever with high mortality rates in domestic pigs.
- The disease has a case fatality rate (CFR) of almost 100 per cent.

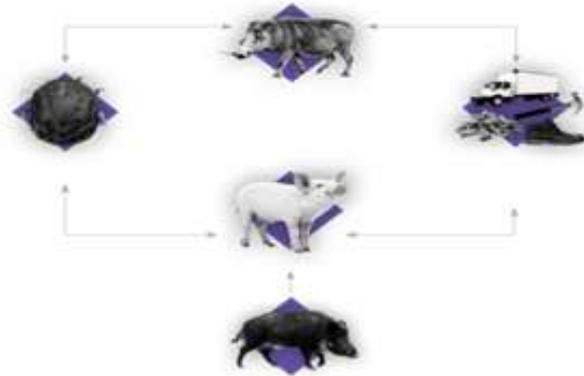
## Demographic Terms



[Link to the above video](#)

## The Lifecycle of African swine fever Virus

- When ticks feed on the wild animals' blood.
- Domestic pigs can catch the virus through tick bites.
- Through contact with contaminated food or materials. .
- By coming into contact with bodily fluids or carcasses of infected wild boar (also *Sus scofra*).



## Ticks

### What are routes of Transmission?

- Its routes of transmission include
  - ✓ Direct contact with an infected or wild pig (alive or dead)
  - ✓ Indirect contact through ingestion of contaminated material such as food waste, feed or garbage,
  - ✓ Through biological vectors such as ticks.

### Does it affect Humans?

- ASF cannot be spread to humans and other non-swine animals and livestock and is not a threat to human health.
- However, humans can carry the virus on their clothing, shoes and equipment and can spread the disease unknowingly

### Is it diff from Classical Swine fever?

- It is important that determination of ASF is made through laboratory testing and it is differentiated from Classical Swine Fever (CSF), whose signs may be similar to ASF, but is caused by a different virus for which a vaccine exists.
- ASF is caused by a virus that is unrelated to the classical swine fever virus and has a more complex genetic structure.
- Both ASF and CSF affect pigs only, and do not infect humans and other livestock.
- Note
  - ✓ SWINE FLU ( affects both humans and pigs)

## But has it also originated from China?

- The first outbreak was retrospectively recognized as having occurred in 1907 after ASF was first described in 1921 in Kenya.
- The disease remained restricted to Africa until 1957, when it was reported in Lisbon, Portugal.
- ASFV crossed the Atlantic Ocean, and outbreaks were reported in some Caribbean islands.
- Major outbreaks of ASF in Africa are regularly reported to the World Organisation for Animal Health.
- In 2018 the virus spread to Asia, affecting more than 10 percent of the total pig population in several countries, leading to severe economic losses in the pig sector.

## How did the current outbreak start?

- As per the latest update issued by the UN Food and Agriculture Organisation (FAO), the current outbreak of ASF has affected China, Mongolia, Vietnam, Cambodia, Myanmar, the Philippines, Republic of Korea and Indonesia among others.
- In China, the first ASF outbreak was confirmed in August 2018 and since then more than 1 million pigs have been culled in the country.



## Let's Talk about Outbreak in India?

- The current outbreak of ASF in India is the first time that the disease has been reported in the country.
- The pig farming sector in Assam has been hit hard by African swine fever which is a highly contagious viral disease that affects both domestic and wild pigs.
- The outbreak of African swine fever in Assam and Arunachal Pradesh was confirmed on May 1 by National Institute of High Security Animal Diseases (NIHSAD) in Bhopal after samples sent from those two states tested positive.

## Exact origin in India

- Officials believe ASF came into India through Tibet into Arunachal Pradesh and then into Assam, the state with the highest population of pigs in the country.
- There is a province (in Tibet) which borders Arunachal Pradesh. It could have possibly travelled from there but that is suspected.



## Steps Taken as Mentioned in News

- Since ASF has no vaccination, the infected pigs are culled.
- Currently, the dead pigs are undergoing deep burials, with salt and bleaching powder. However, cases of pig carcasses floating down rivers have been reported from districts in Assam.
- The authorities have advised all pig farmers to contain the spread through bio-security (This is one form of quarantine for the pigs,)
- Trying to create awareness about this.
- Note
  - ✓ All Northeast states should follow this and fight this together since the states have very porous borders,
  - ✓ Assam Chief Minister Sarbananda Sonowal has asked the Veterinary Department and Forest Department to work with the National Pig Research Centre of Indian Council of Agricultural Research,
  - ✓ To “draw a broad roadmap to save the state’s pig population from African swine fever.”

## Now Lets answer the Question

Answer the following in context with African swine fever:

1. It does not affect humans directly but they can act as carriers of the virus.
  2. Its symptoms are similar to classical swine fever but both are caused from different viruses.
- A. Only 1  
B. Only 2  
C. Both 1 and 2  
D. Neither 1 nor 2

Answer: C

## 22. Anti-Defection Law and the Rajasthan Crisis

### Sachin Pilot Moves HC

- Sachin Pilot and 18 MLAs had moved the High Court last week, claiming that the disqualification notices issued to them by the Speaker of the Rajasthan Legislative Assembly were an attempt to stifle their voices, which sought a leadership change within the party in the “most democratic manner”.
- They had challenged the correctness and validity of the notices.
- They had also challenged the Constitutional validity of Para 2(1) (a) of the Tenth Schedules, which is the anti-defection law.
- The High Court barred Rajasthan assembly Speaker C.P. Joshi from acting on the 14 July disqualification notices issued to Sachin Pilot and 18 other ‘rebel’ Congress MLAs.
- The Rajasthan High Court’s decision agreeing to hear in detail the challenge against anti-disqualification laws made by 19 rebel Congress MLAs has opened up the debate on a law considered settled on the Tenth Schedule of Constitution.
- The HC has agreed to test whether disqualification of an MLA for dissent against the party violates the Constitution’s basic structure and fundamental right to free speech
- Although the MLAs have not officially resigned from the Congress, actions perceived as “anti-party activities” are often inferred as voluntarily resigning from the party.

### The Tenth Schedule

- What does the Tenth Schedule say? And how has the Supreme Court interpreted the anti-defection law over the years?
  - ✓ The anti-defection law, enshrined in the Tenth Schedule of the Constitution of India, was inserted in 1985 through the 52nd amendment to the Constitution to prevent political defections.
- It lists two situations for disqualification on the ground of defection.
  - ✓ Firstly, if an MP or an MLA “has voluntarily given up his membership of such political party” (clause 2(1)(a)).
  - ✓ Secondly, if he votes or abstains from voting in the House contrary to any direction issued by his party, that is if he violates the party whip in the House, without obtaining prior permission of such party and such act has not been condoned by the party within 15 days, (clause 2(1)(b)).

### Exceptions to Defection

- Exceptions to the Disqualification on the Ground of Defection
  - ✓ If a member goes out of his party as a result of a merger of the party with another party.
  - ✓ If a member, after being elected as the presiding officer of the House, voluntarily gives up the membership of his party or rejoins it after he ceases to hold that office.

### Powers of the Speaker

- Powers of Speaker with regard to Anti-Defection Law



- ✓ Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House.
- ✓ After the Kihoto Hollohan case (1992) the Supreme Court declared that the decision of the presiding officer is not final and can be questioned in any court. It is subject to judicial review on the grounds of malafide, perversity, etc.
- ✓ As for the time that the Speaker can take to decide the disqualification proceedings, the Supreme Court held in January this year that the decision should ordinarily be taken within 3 months, “absent any exceptional circumstances”.

## Related Incident

- In 2017, Bharatiya Janata Party (BJP) formed the government in Manipur after seven legislators of Congress joined the BJP.
- The Congress party asked the Speaker to disqualify these seven, but the petitions were kept pending.
- According to paragraph 2(1)(a) of the Tenth Schedule of the Constitution, an elected member of the house shall be disqualified from being a member if they win the election as a candidate of one party and then join another.
- Recently, a crisis in the ruling party emerged because the four MLAs (out of seven MLAs, who had in 2017 jumped to BJP) once again pledged their votes to the Congress and the rest three were disqualified.
- Citing the 2016 SA Sampath Kumar vs Kale Yadaiah and Others case relating to the disqualification of a Telangana MLA, the Supreme Court directed the Speaker of Manipur to rule on the disqualification within three months.
- The Manipur High Court also reasoned that since the remedy under Tenth Schedule is an alternative to moving courts and if the remedy is found to be ineffective due to deliberate inaction or indecision on the part of the Speaker, the court will have jurisdiction.

## Pilot's Challenge

- What has Sachin Pilot alleged?
  - ✓ It is the first ground under clause 2(1)(a) that Pilot and the MLAs have challenged in the high court, asserting that the provision cannot be so widely construed that the very same fundamental freedom of speech and expression of a member of the House is jeopardised.
  - ✓ He said in his petition that “mere expression of dissatisfaction or even disillusionment against the party leadership cannot be treated to be conduct falling within the clause 2(1)(a) of the 10th Schedule of the Constitution of India”
  - ✓ They have, therefore, demanded that clause 2(1) (a) be declared ultra vires (outside the scope of) the basic structure of the Constitution, and the freedom of speech and expression under Article 19(1) (a).

## Prior Incidents

- What does voluntarily giving up party membership mean?

- ✓ In a 1994 judgment, the Supreme Court had held that voluntarily giving up membership does not necessarily mean that the legislator needs to formally resign, and that this can be inferred from the member's "conduct" as well.
- ✓ The court had explained: "Even in the absence of a formal resignation from membership, an inference can be drawn from the conduct of a member that he has voluntarily given up his membership of the political party to which he belongs".
- For instance, in 2007, the Supreme Court had upheld the disqualification of 13 Bahujan Samaj Party MLAs who had supported Mulayam Singh's claim to form the government in 2003.
- The MLAs had met the Governor along with the general secretary of the rival party and made a written request to him to invite the Leader of the Opposition to form the government as against their chief minister's advice to the Governor to dissolve the Assembly.
- On this, the Supreme Court had said: "An irresistible inference arises that the 13 members have clearly given up their membership of the BSP. No further evidence or enquiry is needed to find that their action comes within paragraph 2(1)(a) of the Tenth Schedule."
- However, in 2011, the Supreme Court had set aside the Karnataka Speaker's order disqualifying 11 BJP MLAs.
- These MLAs had approached the Governor, saying that they had withdrawn their support to the government led by Yeddyurappa because he was corrupt and had lost the confidence of the people.
- Among other things, the Supreme Court had noted that the MLAs had continued to be members of the BJP, but were merely against Yeddyurappa.

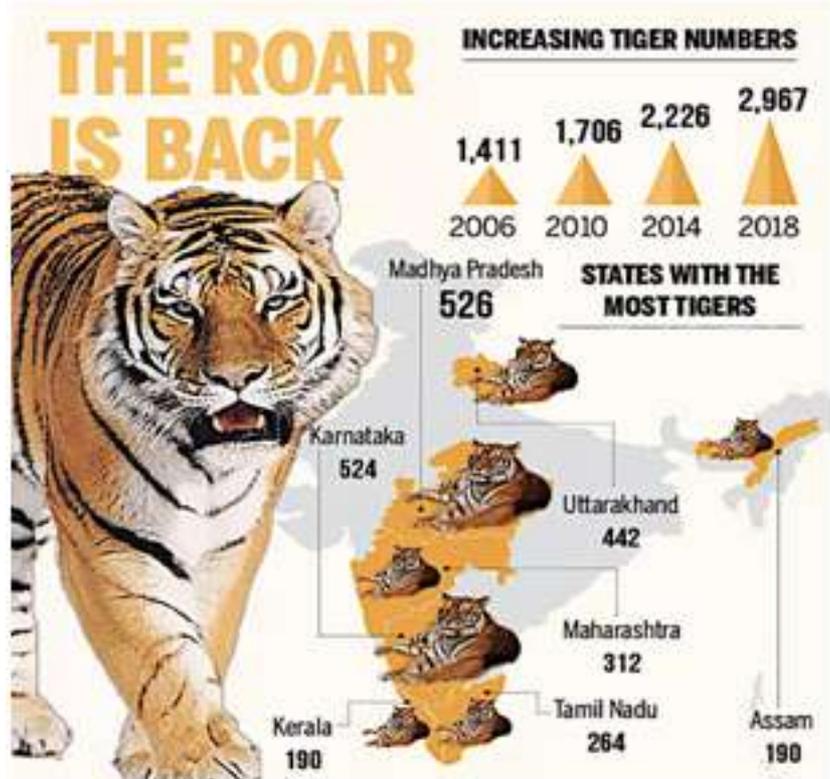
## Suggestions

- The Supreme Court has held that the Parliament consider taking a relook at the powers of the Speakers citing instances of partisanship.
- It has suggested independent tribunals to decide on disqualification.
- In Britain, the Speaker is strictly a non-party person. There is a convention that the Speaker has to resign from his party and remain politically neutral. .
- Hence, this mechanism can be adopted whereby Speakers need to renounce all political affiliations, membership and activity once they have been elected to the office.
- The Halim Committee on anti-defection law (1998) recommended that the words 'voluntarily giving up membership of a political party' be comprehensively
- The Law Commission, in its 170th report in 1999, suggested that provisions that exempt splits and mergers from disqualification to be deleted, pre-poll electoral fronts should be treated as political parties under the anti-defection law and political parties should limit issuance of whips only to instances when the government is in danger.
- The Venkatachaliah Commission (NCRWC, 2002) recommended that defectors should be barred from holding any ministerial or remunerative political office for the remaining term of the House. It also said that the vote of any defector should not be counted in a confidence or no-confidence motion.

## 22.1.Global Tiger Day

### What is International/ Global Tiger Day?

- Global Tiger Day, often called International Tiger Day, is an annual celebration to raise awareness for tiger conservation, held annually on 29th July every year.
- It was established in 2010 at Saint Petersburg Tiger Summit in Russia to raise awareness about the decline of wild tiger numbers, leaving them in the brink of extinction and to encourage the work of Tiger conservation.
- In the Summit, a declaration was made that governments of tiger populated countries had vowed to double tiger population by 2020.
- The 13 countries having tiger population, apart from India, include Russia, Laos, Myanmar, Nepal, Thailand, Bhutan, China, Cambodia, Bangladesh, Indonesia, Malaysia and Vietnam.



### India and Tiger Conservation

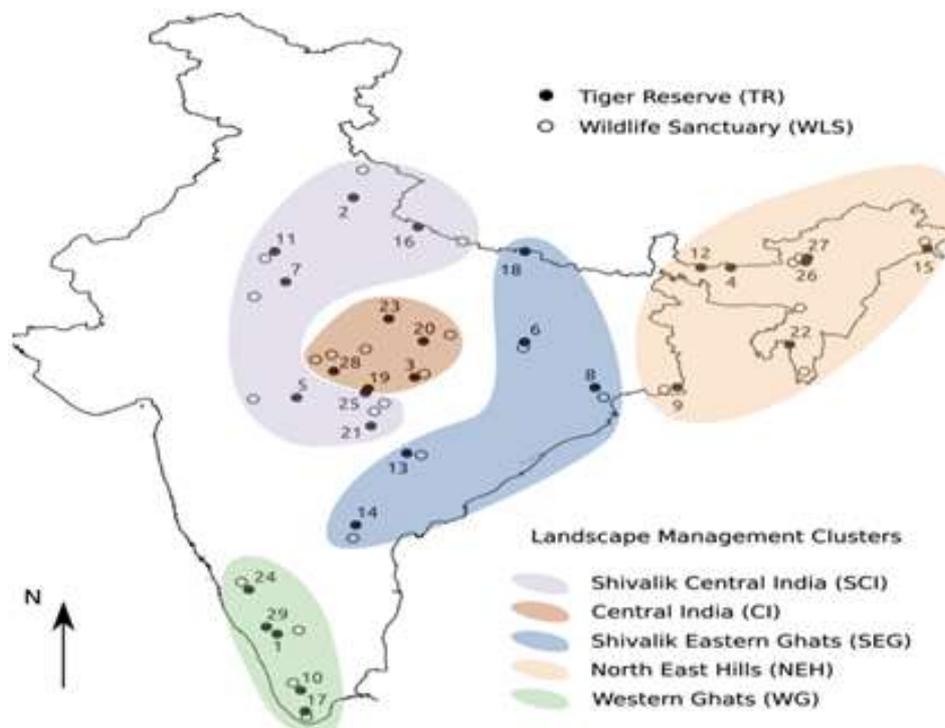
- The Indian government launched an ambitious project in 1973 to establish ranger-protected havens in national parks. Called 'Tiger Protection Program'-Project Tiger, It aimed to boost the number of tigers by conserving their dwindling habitats and ecosystems.
- Initially 9 Tiger Reserves had been setup in the country - Manas, Palamau, Simlipal, Corbett, Ranthambore, Kanha, Melghat, Bandipur and Sundarban Tiger Reserves.
- Presently, the number of Tiger Reserves has increased from 9 to 50 in the country.
- There are 50 Tiger Reserves spread in 18 States of the country covering 72,749 sq. km., which is 2.21% of the geographical area of our country.

**The 50 Tiger Reserves have been divided into five landscape clusters for management, conservation and evaluation representing geographical and vegetation of tiger habitats.**

### Tiger Census in India

- The national tiger census, or the All India Tiger Estimation, is done quadrennially and is steered by the National Tiger Conservation Authority, along with the Wildlife Institute of India and is implemented by the state forest departments.
- During the first census, conducted in 2006, the count was 1,411. The numbers have risen steadily with each census - 1,706 in 2010 and 2,226 in 2014.

- India had released the results of the fourth cycle of All India Tiger Estimation - 2018 on the occasion of Global Tiger Day-2019.
- Union Environment Minister, Shri Prakash Javadekar released of the detailed report of Tiger Census (2018) on the eve of Global Tiger Day in New Delhi.
- The detailed report of the 4th All India Tiger Estimation is unique in the following ways;
  - ✓ Abundance index of co-predators and other species has been carried out which hitherto was restricted only to occupancy
  - ✓ Sex ratio of tigers in all camera trap sites has been carried out for the first time.
  - ✓ Anthropogenic effects on tiger population have been elaborated in a detailed manner.
  - ✓ Tiger abundance within pockets in tiger reserves has been demonstrated for the first time.





## COUNTING THE STRIPES

### TIGER NUMBERS IN PAST CENSUSES



### OCCUPANCY AREA (SQ KM)



### 2018 HIGHLIGHTS

**14,000** camera traps to be used, 44% more than in 2014

**18 states** in survey

**3,200m** Altitude of highest spot under survey (in Arunachal)

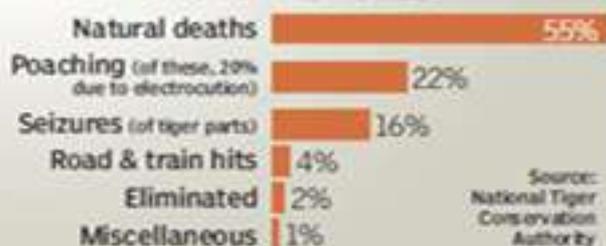
**MSTRIPES mobile app** to track, upload and geo-tag images

**55%**  
OF DEATHS NATURAL

**560** Total tiger mortality in last 6 years (2012-2017)

**408** Cases closed with cause of death identified

### HOW THEY DIED



Source: National Tiger Conservation Authority



- The Ministry is working on a programme in which efforts would be made to provide water and fodder to animals in the forest itself to deal with the challenge of human-animal conflict which is causing deaths of animals.
- For this LIDAR based survey technology will be used for the first time. Lidar is a method for measuring distances by illuminating the target with laser light and measuring the reflection with a sensor.
- As per the report, India has 70 percent of world's tiger population.
- "Tigers and other wild life are a kind of soft power India has to show on the international front."
- Madhya Pradesh has the largest number of tigers -526. There are regional imbalances - Mizoram doesn't have a single tiger, and tigers have vanished from Buxa, Bampa and Palamau, and the population in Orissa has shrunk from 45 to 28 since 2006. However, Kerala recorded a 313 per cent rise in population for the same period, its present number is at 190.

## 22.2.Rafale-The Birds Have Arrived

- Everything you need to know about Rafale, Mig, sukhoi.

### Why Discussing This Today

- India received its first batch of new multi-role combat fighter aircraft in nearly two decades with the arrival of five Rafale jets.

### Who makes Rafale

- French aerospace major Dassault Aviation.
- We already use Mirage-2000 built by them.

### Quick info about Rafale

- Brings IAF's squadron strength to 31 (required 42).
- A top speed of 1.8 Mach.
- Rafale has seen war under the French Air Force for its missions in Afghanistan, Libya, Mali, Central African Republic, Iraq and Syria.

### Rafale comes equipped with

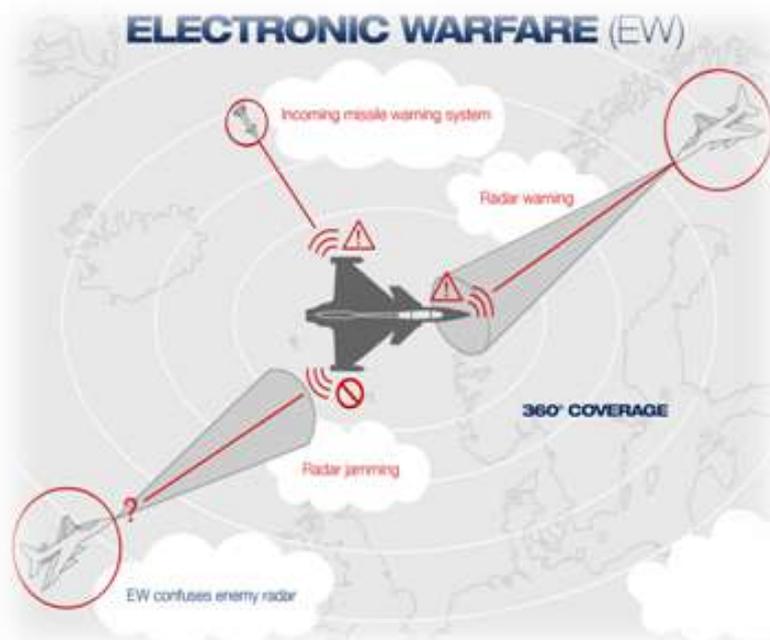
- Meteor missiles
  - ✓ Air-to-Air missiles
  - ✓ Beyond Visual Range (BVR) of over 100 km
  - ✓ A top speed of Mach 4
- SCALP missiles
  - ✓ Also called Storm Shadow (in UK)
  - ✓ Air-to-ground
  - ✓ Cruise missile
  - ✓ Range over 300 km

- MICA missiles
  - ✓ Air-to-air
  - ✓ Used in dog fighting
  - ✓ Also used on Mirage 2000
- HAMMER
  - ✓ Highly Agile and Maneuverable Munitions Extended Range
  - ✓ A precision-guided munition
  - ✓ Air-to-ground precision guided missile
  - ✓ Can be used against bunker-type hardened targets

### Comparison with China's Chengdu J20

- Also known as Mighty Dragon
- Called fifth generation combat jets (Rafale being 4.5 generation)
- J20 have no actual experience of war.
- Rafale can carry more fuel
- Rafale can carry more weapons

### Rafale can do Electronic warfare



- Electronic warfare (EW)
- It is any action involving the use of the electromagnetic spectrum (EM spectrum) or
- Directed energy to control the spectrum
- Attack an enemy, or

- Impede enemy assaults.
- Deny the opponent the advantage of, and ensure friendly unimpeded access to, the EM spectrum.

### **About Mirage-2000**

- Also made by French Dassault Aviation.
- First commissioned in 1985.
- Single seater, single engine
- Maximum speed of 2,495 km/hr (Mach 2.3).

### **About SU-30 MKI**

- Russian
- Advanced fighter jets
- Inducted in 2002
- Primary air-to-air and air-to-ground strike machines.
- It is a twin seater twin engine multirole fighter.
- It has a maximum speed of 2,500 km/hr (Mach 2.35).

### **About MiG-29**

- Russian
- Mikoyan-Gurevich Design Bureau
- Introduced in 1970s to counter US' F-Series planes like F-15 and F-16
- Commissioned by IAF in 1985
- The MiG29 forms the second line of defence after the Sukhoi Su-30MKI
- Twin engine, single seater
- Maximum speed of 2,445 km per hour (Mach-2.3)

### **About MiG-27**

- Russian origin
- Designed by Mikoyan-Gurevich Design Bureau
- Manufactured by HAL under a license agreement.
- Single engine, single seater
- Tactical strike fighter aircraft
- Maximum speed of 1,700 km/hr (Mach 1.6)

### **About Jaguar**

- Developed together by British Royal Air Force and French Air Force.



- Twin-engine, single seater
- Maximum speed of 1,350 km /hr (Mach 1.3)

### About MiG-21 Bison

- Russian
- Mikoyan-Gurevich Design Bureau
- Opted by IAF in 1961
- Single engine, single seater
- Forms the back-bone of the IAF.
- Max speed of 2,230 km/hr (Mach 2.1)

### Future Orders of IAF

- From Russia:
  - ✓ 21 MiG-29
  - ✓ Up gradation of 59 existing MiG-29
  - ✓ Procurement of 12 Su-30MKI
  - ✓ Majority of which will be license-manufactured by HAL
- Domestic:
  - ✓ 83 Light Combat Aircraft (LCA) Mk-1A (Tejas)
  - ✓ LCA Mk-2 is under development
  - ✓ Fifth generation advanced medium combat aircraft (AMCA) is also under development

### Deals to Remember

- 36 Rafale jets from France
- S-400 air defence systems from Russia
- Apache attack helicopters and Chinook heavy lift helicopters from the U.S

## 22.3.National Education Policy 2020

### Introduction

- First new education policy in 34 years has been approved by the Union Cabinet.
- 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.
- Revision of the 1986 National Education Policy was long due.

### Important As

- It provides for major reforms in higher education, increased focus on non-academic skills and increased inclusion through language diversity and course fluidity.



- It enables a paradigm shift towards a more imaginative and broad-based liberal education as a foundation for holistic development of all students with rigorous specialisation in chosen disciplines

## Aims To

- Achieve 100 per cent youth and adult literacy in India.
- To increase the public investment in the education sector from the current 4.3 per cent to reach 6 per cent of GDP at the earliest.

## School Education

### Universal Access

- The NEP 2020 has provisions to ensure universal access to school education at all levels- pre school to secondary.
- Provisions include
  - ✓ Infrastructure support,
  - ✓ innovative education centers to bring back dropouts into the mainstream,
  - ✓ tracking of students and their learning levels,
  - ✓ facilitating multiple pathways to learning involving both formal and non-formal education modes and
  - ✓ Association of counselors or well-trained social workers with schools.
- The NEP 2020 also provides for open learning for classes 3, 5 and 8 through NIOS and State Open Schools, secondary education programs equivalent to Grades 10 and 12, vocational courses, adult literacy and life-enrichment programs.
- Through NEP 2020, the Centre hopes to bring back about 2 crore out of school children into main stream.

## Introduction of the 5+3+3+4 Structure

- Break-down of the existing 10+2 structure and introduction of the 5+3+3+4 structure of School Education.
- The policy aims at transforming circular and pedagogical structure from the existing 10 years + 2 years to a more inclusive foundational to secondary stage transition.
- While the actual system would not change, in terms of the years a child spends within the formal education system in the country at school level, the new structure brings into fold the already existing play schools within the ambit of 'formal education'.
- This will bring the uncovered age group of 3-6 years under school curriculum, which has been recognised globally as the crucial stage for the development of mental faculties of a child.
- The new system will have 12 years of schooling with three years of Anganwadi/pre-schooling.
- NCERT will develop a framework of the early childhood education of children up to the age of 8. ( National Curricular and Pedagogical Framework for Early Childhood Care and Education (NCPFECCE)

## Attaining Foundational Literacy and Numeracy

- A National Mission on Foundational Literacy and Numeracy will be set up by the MHRD.
- States will prepare an implementation plan for attaining universal foundational literacy and numeracy in all primary schools for all learners by grade 3 by 2025.
- A National Book Promotion Policy will also be formulated.

## Reforms in School Curricula and Pedagogy

- The school curricula and pedagogy will aim for holistic development of learners by equipping them with the key 21st century skills, reduction in curricular content to enhance essential learning and critical thinking and greater focus on experiential learning.
- Students will have increased flexibility and choice of subjects.
- There will be no rigid separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams.
- Vocational education will start in schools from the 6th grade, and will include internships.
- A new and comprehensive National Curricular Framework for School Education, NCFSE 2020-21, will be developed by the NCERT.

## Multilingualism and the Power of Language

- The NEP 2020 advocates for mother tongue/local language/regional language as the medium of instruction at least till Grade 5, but preferably till Grade 8 and beyond.
- Sanskrit to be offered at all levels of school and higher education as an option for students, including in the three-language formula.
- Other classical languages and literatures of India also to be available as options.
- No language will be imposed on any student.

- Several foreign languages will also be offered at the secondary level.
- Indian Sign Language (ISL) will be standardized across the country and National and State curriculum materials developed, for use by students with hearing impairment.

### **Assessment Reforms**

- With NEP 2020, the Centre hopes to shift from summative assessment to a more competency-based regular assessment which tests analysis, critical thinking and conceptual clarity.
- All students will take school examinations in Grades 3, 5, and 8.
- Board exams for Grades 10 and 12 will be continued, but redesigned with holistic development as the aim.
- A new National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), will be set up as a standard-setting body.

### **Equitable and Inclusive Education**

- NEP 2020 provides for setting up of Gender Inclusion Fund and also Special Education Zones for disadvantaged regions and groups.
- Children with disabilities will be enabled to fully participate in the regular schooling process from the foundational stage to higher education, with support of educators with cross-disability training, resource centers, accommodations, assistive devices, appropriate technology-based tools and other support mechanisms tailored to suit their needs.
- Every state/district will be encouraged to establish “BAL Bhavans” as a special daytime boarding school, to participate in art-related, career-related, and play-related activities.
- Free school infrastructure can be used as Samajik Chetna Kendras

### **Robust Teacher Recruitment and Career Path**

- Teachers will be recruited through robust, transparent processes.
- Promotions will be merit-based, with a mechanism for multi-source periodic performance appraisals and available progression paths to become educational administrators or teacher educators.
- A common National Professional Standards for Teachers (NPST) will be developed by the National Council for Teacher Education by 2022, in consultation with NCERT, SCERTs, teachers and expert organizations from across levels and regions.

### **School Governance**

- Schools can be organized into complexes or clusters which will be the basic unit of governance and ensure availability of all resources including infrastructure, academic libraries and a strong professional teacher community.

### **Standard-Setting and Accreditation for School Education**

- NEP 2020 envisages clear, separate systems for policy making, regulation, operations and academic matters.
- States/UTs will set up independent State School Standards Authority (SSSA).

- Transparent public self-disclosure of all the basic regulatory information, as laid down by the SSSA, will be used extensively for public oversight and accountability.
- The SCERT will develop a School Quality Assessment and Accreditation Framework (SQAAF) through consultations with all stakeholders.

## Higher Education

### Increase Ger To 50% By 2035

- NEP 2020 aims to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3 per cent (2018) to 50 per cent by 2035.
- At least 3.5 crore new seats will be added to higher education institutions.

### Holistic Multidisciplinary Education

- The policy introduces broad-based, multi-disciplinary, holistic undergraduate education with flexible curricula, creative combinations of subjects, integration of vocational education and multiple entry and exit points with appropriate certification.
- UG education can be of 3 or 4 years with multiple exit options and appropriate certification within this period. For example, certificate after 1 year, advanced diploma after 2 years, Bachelor's degree after 3 years and Bachelor's with research after 4 years.
- An Academic Bank of Credit is to be established for digitally storing academic credits earned from different institutes so that these can be transferred and counted towards final degree earned.
- Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards in the country.
- The National Research Foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education.

### Regulation

- Higher Education Commission of India (HECI) will be set up as a single overarching umbrella body the for entire higher education, excluding medical and legal education.
- HECI will function through faceless intervention through technology, and will have powers to penalise higher education institutions for not conforming to norms and standards.
- Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.

### Rationalised Institutional Architecture

- The definition of the university will allow a spectrum of institutions that range from Research-intensive universities to teaching-intensive universities and autonomous degree-granting colleges.
- Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges.
- Over a period of time, it is envisaged that every college would develop into either an autonomous degree-granting college, or a constituent college of a university.

### Financial Support for Students

- Efforts will be made to incentivise the merit of students belonging to SC, ST, OBC, and other SEDGs.
- The National Scholarship Portal will be expanded to support, foster, and track the progress of students receiving scholarships.
- Private HEIs will be encouraged to offer larger numbers of free ships and scholarships to their students.

### Open and Distance Learning

- This will be expanded to play a significant role in increasing GER.
- Measures such as online courses and digital repositories, funding for research, improved student services, credit-based recognition of MOOCs, etc, will be taken to ensure it is at par with the highest quality in-class programmes.

### Online and Digital Education

- A dedicated unit for the building of digital infrastructure, digital content and capacity building will be created in the MHRD to look after the e-education needs of both school and higher education.

### Technology in Education

- An autonomous body, the National Educational Technology Forum (NETF), will be created to provide a platform for the free exchange of ideas on the use of technology to enhance learning, assessment, planning, administration.
- Appropriate integration of technology into all levels of education will be done to improve classroom processes, support teacher professional development, enhance educational access for disadvantaged groups and streamline educational planning, administration and management.

## 22.4. Air pollution in India and Donald Trump

### Trump's Allegation



## Air Pollution across the World



## Air Pollution in India

- A quarter of India's population is exposed to pollution level not seen in any other country: Air Quality Life Index (AQLI) by Energy Policy Institute of the University of Chicago (EPIC)
- An average India's life is cut short by more than five years, relative to what it would be if the WHO guidelines are met
- Particulate pollution in India has increased by 42% in the last two decades and was the greatest risk to human health before covid-19
- 84% of Indians live in areas where the pollution levels exceed the country's own air quality standards, while the entire population is exposed to levels that exceed the WHO guidelines

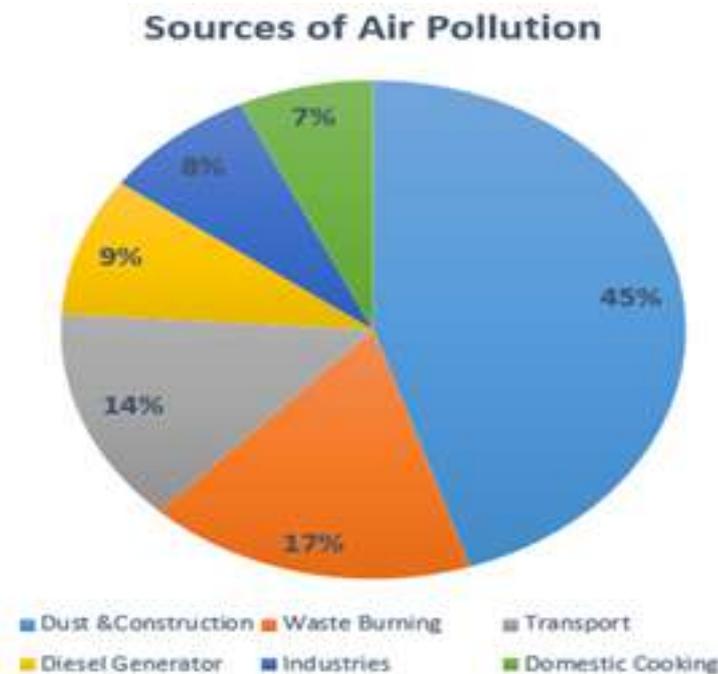


- 21 of the world's 30 cities with the worst air pollution are in India according to World Air Quality Report, with six in top 10
  - ✓ Ghaziabad is the world's most polluted city

### Major Air Pollutants in India

- Nitrogen Oxides (NOx): NOx leads to the formation of secondary particulate pollution and cannot be filtered by air purifiers
- PM 2.5 and PM 10
- Sulphur Dioxide: India is becoming the world's top sulphur dioxide emitter. While China's sulphur dioxide emission fell by 75 per cent since 2007 India's has increased by 50 per cent. Sulphur dioxide emissions come from coal-fired power plants as this pollutant is produced predominantly when coal is burned to generate electricity

### Air Pollution Mix



### National Clean Air Programme (NCAP)

- In 2019, the Centre had declared a "war on pollution" with the launch of the National Clean Air Programme (NCAP)
- National Clean Air Programme (NCAP) aims to reduce PM 2.5 and the bigger particulate PM 10 air pollution in 102 cities by 20-30% by 2024 compared to 2017 levels
- NCAP's goals are non-binding, but if India does achieve and sustain this reduction, it would lead to remarkable health improvements

### Impact of Air Pollution

- As per WHO, it causes an estimated 7 million premature deaths a year globally, mainly as a result of increased mortality from cardiovascular diseases, cancers and respiratory infections

- Extreme air pollution episodes affect millions of people in densely populated regions who are exposed to thick, toxic smog
- Burning of fossil fuels, which cause air pollution, also emit greenhouse gases which are key driver to climate change

### Ray of Hope

- National air pollution in India decreased by 20% from 2018 to 2019, with 98% of cities experiencing of varying levels of improvement
- Countries are increasing their air quality monitoring, with the number of monitoring stations increasing by more than 200% since last year

