

# CURRENT AFFAIRS

WEEKLY

WEEK-4  
NOVEMBER  
2020

## MAINS

- GS-I** ● Could help help relieve ocean acidification?
- GS-II** ● Article 32 and its ever changing interpretation
  - The unrest on the Assam-Mizoram border
  - India & RCEP
- GS-III** ● Drug-resistant Infections: The Silent Pandemic
  - Proposition 22, The Future of the GIG Economy
- GS-IV** ● How Is Ethical AI

## PRELIMS

- GOVERNANCE** ● Create Mechanism to Address Grievances Against Fake News: SC to Centre
  - Mizoram Bru refugees demand immediate implementation of settlement pact
- INTERNATIONAL RELATIONS** ● APEC agree on free trade
  - India-Luxembourg's first summit in two decades
  - Iran Says It Will 'automatically' Fulfill Nuclear Commitments If US Lifts Sanction
- ECONOMY** ● WHO commits to eliminate cervical cancer globally
- ENVIRONMENT** ● 2 More Wetlands in India added to list of 'Recognised Sites' under Ramsar Convention
  - Karnataka to soon declassify forest
  - Tristan da Cunha, declared the largest fully protected marine reserve
- SCIENCE & TECHNOLOGY** ● Ariel Space Mission

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The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

# CURRENT AFFAIRS ANALYST

WEEK- 4 (NOVEMBER, 2020)

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**SECTION: A**  
**(MAINS)**

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**CURRENT AFFAIRS**

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# COULD KELP HELP RELIEVE OCEAN ACIDIFICATION?

## CONTEXT

- A new analysis of California’s Monterey Bay evaluates kelp’s potential to reduce ocean acidification,

### ◎ BACKGROUND

- A new on-site, interdisciplinary analysis of giant kelp in Monterey Bay off the coast of California sought to further investigate kelp’s acidification mitigation potential.
- The findings show that near the ocean’s surface, the water’s pH was slightly higher, or less acidic, suggesting the kelp canopy does reduce acidity.
- However, those effects did not extend to the ocean floor, where sensitive cold-water corals, urchins and shellfish dwell and the most acidification has occurred.

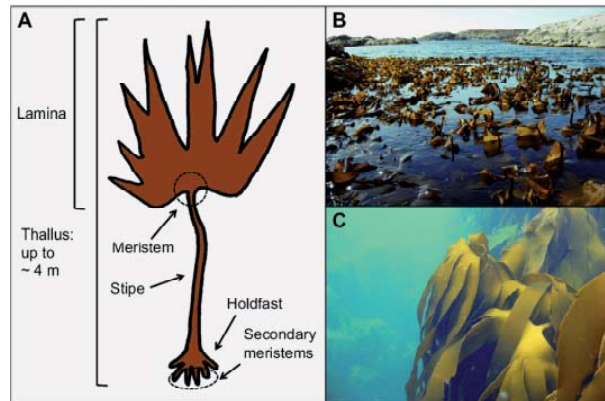
#### Monterey Bay, California

- Monterey Bay is a bay of the Pacific Ocean located on the coast of the U.S. state of California.
- The bay is south of the major cities of San Francisco and San Jose. Santa Cruz is located at the north end of the bay, and Monterey is on the Monterey Peninsula at the south end.
- Species: Monterey Bay is home to many species of marine mammals, including sea otters, harbor seals, and bottlenose dolphins; as well as being on the migratory path of gray and humpback whales and a breeding site for elephant seals.
- Several varieties of kelp grow in the bay, some becoming as tall as trees, forming what is known as a kelp forest.
- Monterey Bay is particularly threatened from ocean acidification because of the natural process of upwelling — which brings the cold, deep water from arctic currents to the surface. That cold water is naturally more acidic than the Pacific’s surface waters.
- Higher acid levels off the California coast kill off coral and make it harder for organisms like clams and oysters to build their shells.
- It also causes more frequent and more toxic algae blooms.

### ◎ ANALYSIS

#### What is Kelp?

- Kelp is the largest and fastest-growing marine algae or seaweed.
- It belongs to the brown algae group known as **Phaeophyta**.
- Although kelp may resemble an underwater plant, it is in fact a protist, the same family of organisms as moulds and amoebas.
- Kelp forests are found in the temperate and polar coastal regions of the world.
- Four species of kelp are found around the South African coast, with *Ecklonia maxima* being the most familiar, often being washed up on beaches following heavy storms.
- Three of these species, namely sea bamboo (*Ecklonia maxima*), split-fan kelp (*Laminaria pallida*) and bladder kelp (*Macrocystis pyrifera*) can be seen in the *Kelp Forest Exhibit* at the Two Oceans Aquarium.



#### Important facts

<b>Scientific name</b>	Laminariales
<b>Class</b>	Phaeophyceae
<b>Phylum</b>	Ochrophyta
<b>Higher classification</b>	Brown algae

<b>Order</b>	Laminariales
<b>Domain</b>	Eukaryota

### How is it similar to plant?

- Like plants, kelp needs sunlight to photosynthesise and convert carbon dioxide into sugars.
- Unlike plants, however, kelp does not use roots to extract nutrients from the soil - kelp can extract the needed nutrients directly from the water around it.
- So, instead of a "root system" it has a modified anchoring system known as a holdfast.

### What is ocean acidification?

- Ocean acidification refers to the process of our planet's oceans becoming more acidic due to the global increase in carbon dioxide emissions.
- Since the Industrial Revolution, experts estimate that Earth's oceans have absorbed more than a quarter of the atmospheric carbon dioxide (CO<sub>2</sub>) released from the burning of fossil fuels.
- Once in the ocean, the dissolved carbon dioxide undergoes a series of chemical reactions that increase the concentration of hydrogen ions while lowering the ocean's pH and carbonate minerals — a process called **ocean acidification**.

### What causes ocean acidification?

- When carbon dioxide from the atmosphere is dissolved in seawater, it forms carbonic acid and releases hydrogen ions.
- These hydrogen ions bond with available carbonate ions (CO<sub>3</sub><sup>2-</sup>) to form bicarbonate (HCO<sub>3</sub><sup>-</sup>), depleting the available carbonate in the oceans.



- Calcium carbonate minerals are the building blocks for the skeletons and shells of many marine organisms. In areas where most life now congregates in the ocean, the seawater is supersaturated with respect to calcium carbonate minerals.
- Less carbonate in the oceans makes it more difficult for calcifying creatures such as corals, clams, sea urchins or plankton to form their calcium carbonate (CaCO<sub>3</sub>) shells or skeletons.

- Acidity or alkalinity is determined by the number of hydrogen ions (H<sup>+</sup>) dissolved in water and is measured by the pH scale.
- The lower the value, the higher the acidity of the environment. A shift in pH to a lower value reflects an increase in acidity.

### Impact of ocean acidification

- Altering ecosystem:** The long-term absorption results in a shift in ocean carbonate chemistry, which has the potential to alter biogeochemical cycles and ecosystem function in the future.
- Altering availability of food resources:** Sundarbans, one of the most biologically rich ecosystems also serves as the spawning ground of rich coastal fisheries of Bay of Bengal. Ocean acidification can severely alter the availability of food resources (e.g. plankton) required for coastal fish populations to thrive. This can ultimately lead to a crash of coastal fisheries and livelihood in the region.
- Impact on nitrogen cycle:** Ocean acidification has the potential to alter the marine nitrogen cycle which controls much of primary production in the sea.
- Increased vulnerability of coastal ecosystem:** Moreover, many fragile coastal ecosystems such as coral reefs, mangroves and lagoons will become vulnerable and reel from the effects of ocean acidification due to change in coastal water carbonate chemistry and thus leading to loss of biodiversity.
- Deteriorating ocean's health:** It could also lead to catastrophic consequences for ocean health and also for tourism of Bay of Bengal nations including India.
- Why does kelp matter?
- Kelp is a keystone organism, which means its role in the ecosystem is so vital, that without it the ecosystem would collapse.
- Kelp forests are among the most productive ecosystems in the world
- Due to climate change and elevated sea temperatures, the environment for kelp to successfully grow in is at risk. This poses a huge threat to biodiversity within the ocean
- Kelp purifies water and removes waste products produced by the animals living within the forests
- Underwater forests provide shelter, food and the ideal habitat for various species
- Commercially, kelp is used in a wide variety of products, from salad dressings, cosmetics, food, vitamin supplements, skin care products, paint, etc.

© **CONCLUSION**

The fast changes are stressing out the entire marine ecosystem. The future holds even more challenges. By 2050, scientists predict that 86 percent of the world's ocean will be warmer and more acidic than anything in modern history. By 2100, the pH of the surface ocean could drop to under 7.8, or more than 150 percent compared to today's already-corrosive state—and potentially even more, in some particularly sensitive parts of the planet.

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# ARTICLE 32 AND ITS EVER CHANGING INTERPRETATION

## CONTEXT

In a latest development, a Supreme Court Bench observed that it is “trying to discourage” individuals from filing petitions under Article 32 of the Constitution.

### ◎ BACKGROUND

- The observation came during the hearing of a petition seeking the release of journalist Siddique Kappan, who **was arrested with three others** while on their way to Hathras, Uttar Pradesh, to report on an alleged gangrape and murder.
- Kerala-based Kappan was arrested on 5 October when he was on his way to Hathras to report on the alleged gang rape and murder of a 20-year-old Dalit woman.
- The police had initially arrested Kappan, along with three others, under **Section 151 of the Code of Criminal Procedure (CrPC)** on the suspicion that they may commit some cognisable offence. Later, they were also booked on charges of sedition and sections of the **Unlawful Activities Prevention Act (UAPA)**.

### ◎ ANALYSIS

#### What is Article 32?

- Article 32 is one of the fundamental rights listed in the Constitution that each citizen is entitled.
- It deals with the ‘Right to Constitutional Remedies’, or affirms the right to move the Supreme Court by appropriate proceedings for the enforcement of the rights conferred in **Part III of the Constitution**.
- It states that the Supreme Court “shall have power to issue directions or orders or writs, including writs in the nature of habeas corpus, mandamus, prohibition, quo warranto and certiorari, whichever may be appropriate, for the enforcement of any of the rights conferred by this Part”.
- The right guaranteed by this Article “shall not be suspended except as otherwise provided for by this Constitution”.
- The Article is included in **Part III of the Constitution** with other fundamental rights including to Equality, Freedom of Speech and Expression, Life and Personal Liberty, and Freedom of Religion.

- Only if any of these fundamental rights is violated can a person approach the Supreme Court directly under Article 32.
- The rights guaranteed under Article 32 cannot be suspended unless provided for by the Constitution.

#### ‘Heart’ and ‘Soul’ of the Constitution

- During the Constituent Assembly debates in December 1948, a discussion on this fundamental right (in the draft, it is referred to as Article 25), Dr B R Ambedkar had said,

*“If I was asked to name any particular Article in this Constitution as the most important — an Article without which this Constitution would be a nullity — I could not refer to any other Article except this one. It is the very soul of the Constitution and the very heart of it...” He said the rights invested with the Supreme Court through this Article could not be taken away unless the Constitution itself is amended and hence it was “one of the greatest safeguards that can be provided for the safety and security of the individual”.*

- Others in the drafting committee also said that since it gives a person the right to approach the Supreme Court as a remedy if fundamental rights are violated, “it is a right fundamental to all the fundamental rights” guaranteed under the Constitution.
- The Constituent Assembly debated whether fundamental rights including this one could be suspended or limited during an Emergency.

#### What is the Court’s observation on Article 32?

- In the case of the journalist **Siddique Kappan**, the court asked why the petitioners could not go to the High Court.

- It has sought responses from the Centre and the UP government.
- In another case last week invoking Article 32, filed by a Nagpur-based man **arrested in three cases** for alleged defamatory content against Maharashtra Chief Minister Uddhav Thackeray and others, the same Bench directed him to approach the High Court first.
  - ▶ Relief under Article 32 was also sought in a petition filed by **Telugu poet Varavara Rao's wife, P Hemalatha**, against the conditions of his detention in jail since 2018.
  - ▶ The Supreme Court directed the Bombay High Court to **expedite the hearing** on a bail plea filed on medical grounds, pending since September.
- It observed that once a competent court had taken cognisance, it was under the authority of that court to decide on the matter.
- In another matter, the Bench of CJI Bobde, Justice A S Bopanna and Justice V Ramasubramanian had **issued a contempt notice** to the Assistant Secretary of the Maharashtra Assembly who, in a letter to Republic TV editor-in-chief Arnab Goswami, had questioned him for approaching the top court against the breach-of-privilege notice.
- The court had then said that the right to approach the Supreme Court under Article 32 is itself a fundamental right and that "there is no doubt that if a citizen of India is deterred in any case from approaching this Court in exercise of his right under Article 32 of the Constitution of India, it would amount to a serious and direct interference in the administration of justice in the country".

#### Observations over the years

- In **Romesh Thappar vs State of Madras (1950)**, the Supreme Court observed that Article 32 provides a "guaranteed" remedy for the enforcement of fundamental rights.
- **"This Court is thus constituted the protector and guarantor of fundamental rights, and it cannot, consistently with the responsibility so laid upon it, refuse to entertain applications seeking protection against infringements of such rights,"** the court observed.
- During the **Emergency**, in **Additional District Magistrate, Jabalpur vs S S Shukla (1976)**, the Supreme Court had said that the citizen loses his right to approach the court under Article 32.

#### Writs

One of the most significant features of Article 32 is that the Supreme Court has the power to issue directions, orders or writs for enforcement of fundamental rights. Someone can seek justice through the five types of writs as provided by Article 32 of the Constitution. These are —

- **Habeas corpus:** Considered to be among the most important writs for personal liberty, habeas corpus literally means to 'produce the body'. It is invoked to seek relief in cases where a person has been unlawfully detained. Individuals can file habeas corpus petitions if they believe they have been wrongfully imprisoned.
- **Mandamus:** The writ of mandamus is issued by a higher court to a lower court or a government official or body, directing them to perform duties that they have refused to do.
- **Certiorari:** A superior court issues a certiorari writ for re-examination of an action or decision by a lower court. It is invoked when a judgment has been delivered in violation of principles of natural justice or in opposition to the procedure established by law.
- **Prohibition:** The writ of prohibition is to stop a lower court from going ahead with certain proceedings to ensure that it does not exceed its jurisdiction.
- **Quo warranto:** This writ is issued to prevent people from assuming positions in public office when she or he is not entitled to it.

#### Where to approach for violation of FRs? SC or HC?

- In civil or criminal matters, the first remedy available to an aggrieved person is that of trial courts, followed by an appeal in the High Court and then the Supreme Court.
- When it comes to violation of fundamental rights, an individual can approach the High Court under Article 226 or the Supreme Court directly under Article 32.
- Article 226, however, is not a fundamental right like Article 32.

#### How Article 32 is different from Article 226?

- Article 226 is enshrined under Part V Chapter V of the Constitution. It empowers the High Courts to issue certain writs.
- Article 226 gives discretionary power to the High courts to issue direction, order, writs including the writs in nature of habeas corpus, mandamus, prohibition, quo warranto, and certiorari

- The scope of Article 226 is much wider than Article 32.
- It not only gives the power to issue direction, order or writs not enforce fundamental rights but also for the enforcement of other rights too.
- It also talks about the interim order for writs and also states the mechanism of how interim order will be disposed of by the High courts.

<b>Article 32</b>	<b>Article 226</b>
It is for enforcement of Fundamental Rights only	It is for enforcement of Fundamental Rights as well as other legal Rights
Power of Supreme court to issue writs	Power of High courts to issue writs
Mandatory power to issue the writ is Mandatory	Discretionary power to issue writs

Scope is narrow	Scope is Wide
It is fundamental Right	It is not a Fundamental Right
Article 32 is suspended during the period of Emergency	It cannot be suspended during emergency
Territorial Jurisdiction is wide	Territorial Jurisdiction is narrower than the Supreme Court.

© **CLOSURE**

Article 32 is a fundamental right which empowers the Supreme court to issue direction, order, and writs. It is known as 'the heart and soul of the Constitution'. It ensures that the rights of the Indian citizens are protected and provisions of the Constitution of India are upheld.

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# THE UNREST ON THE ASSAM-MIZORAM BORDER

## CONTEXT

The recent clash on the Assam-Mizoram border underlines the differences the two States have had since 1972.

### ◎ BACKGROUND

- The boundary dispute between the two states has been simmering since the formation of Mizoram as a separate state in the 1980s.
- The two states have been locked in a boundary dispute for a long time, with Assam accepting the boundary defined by a 1933 notification and Mizoram sticking to an earlier demarcation drawn up in 1875.
- According to an agreement between governments of Assam and Mizoram some years ago, status quo should be maintained in no-man's land in the border area. However, clashes have erupted from time to time over the issue.
- Festering since October 9, the situation along the 164.6-km Assam-Mizoram border took an ugly turn on October 17 with around 20 shops and houses being burnt and over 50 people injured in clashes.
- The Central Government has been trying to solve the dispute, but with little success.
- Mizoram was carved out of Assam in 1972, when it became a separate Union Territory. In 1987, it became a full-fledged state.
- The three South Assam districts of Cachar, Hailakandi and Karimganj share a 164.6 kilometre-long border with Mizoram's Kolasib, Mamit and Aizawl districts.
- Formerly known as Lushai Hills, Mizoram is located on the southern fringes of Northeast India.
- The state shares borders with three northeastern states of Tripura, Assam and Manipur, and a 722-km border with the neighbouring countries of Bangladesh and Myanmar.
- The India-Myanmar border in Mizoram is open, and an unhindered movement of people from both sides has escalated cross-border smuggling.
- The two countries have a **Free Movement Regime (FMR)** that allows people living along the border to travel 16 km into each other's territory without visa.
- At several points, the boundary between the two states is contested. Assam and Mizoram have often sparred over it, sometimes violently.
- Several rounds of dialogue, at various levels, since 1994 have failed to resolve the disagreement.
- The Cachar-Mizoram boundary
- The **North-Eastern Areas (Reorganisation) Act, 1971**, provided for the establishment of the states of Manipur and Tripura and the formation of Meghalaya.
- It also provided for the formation of the Union Territories of Mizoram and Arunachal Pradesh — by the reorganisation of the existing state of Assam.
- **Barak Valley**, comprising the Cachar, Hailakandi and Karimganj districts, is the southernmost tip of Assam.
- Cachar is surrounded on three sides by the hill ranges of Manipur, Mizoram and Meghalaya, and also shares an international boundary, spread across the Barak Valley region, with Bangladesh.
- Mizoram was earlier a part of undivided Assam. The Mizos are an indigenous minority group in Northeast that continues to seek protection of rights and privileges under the Indian Constitution.
- The signing of the **Mizoram Peace Accord** in June 1986, between the Government of India and the

### Previous stand-off

- The region has remained relatively calm though there have been a few instances of clashes in 1994, 2006 and 2018.
- In 1994, tensions escalated in Vairengte when a skirmish broke out between the police personnel of the two states, and a major crisis was averted with the intervention of the home ministry.
- The previous border stand-off had taken place in Zophai area near Bairabi town in Kolasib district of Mizoram in March, 2018 when MZP activists (a Mizo students' body) had tried to reconstruct a resting shed destroyed by Assam's Hailakandi district administration.
- More than 60 people, mostly students, were injured when Assam Police allegedly resorted to lathi-charge and opened fire to disperse the agitators.

### ◎ ANALYSIS

**What is the dispute all about?**

Mizo National Front (MNF), ended the 20-year-old insurgency by the Mizos, and led Mizoram to acquire statehood.

- However, boundary issues that remained suppressed earlier became a border dispute after the separation.
- The boundary between Mizoram and Assam follows naturally occurring barriers of hills, valleys, rivers and forests, and both sides have attributed border skirmishes to perceptual differences over an imaginary line.
- Villagers in Mizoram and Assam, not fully aware of the boundary demarcation, would often cross over to either side for various purposes.

**Important Commissions**

- The Centre’s attempts to resolve the dispute through commissions – the KVK Sundaram Commission in 1971 and then the Shastri Commission in 1985 – failed.
- Assam then moved the Supreme Court seeking a permanent injunction restraining Nagaland from encroaching upon its land.

**What are the other boundary issues in the Northeast?**

- The ‘Seven Sisters’, as the NE states are collectively known, are notorious for their interstate boundary disputes. Assam has a long history of land tussles with states such as Nagaland, Mizoram, Meghalaya and Arunachal Pradesh which were once part of it. During British rule, Assam included present-day Nagaland, Arunachal Pradesh, and Meghalaya besides Mizoram, which became separate states one by one. Today, Assam has boundary problems with each of them.
- **Assam-Nagaland:** Nagaland shares a 500-km boundary with Assam. Violent clashes and armed conflicts, marked by killings, have occurred on the Assam-Nagaland border since 1965.
- In two major incidents of violence in 1979 and 1985, at least 100 persons were killed.

- The boundary dispute is now in the Supreme Court.
- **Assam-Arunachal Pradesh boundary:** On the Assam-Arunachal Pradesh boundary (over 800 km), clashes were first reported in 1992, according to the same research paper.
- Since then, there have been several accusations of illegal encroachment from both sides, and intermittent clashes.
- This boundary issue too is being heard by the Supreme Court.
- **Assam-Meghalaya boundary:** The 884-km Assam-Meghalaya boundary, too, witnesses flare-ups frequently.
- As per Meghalaya government statements, today there are 12 areas of dispute between the two states.

<b>Inter-State Border Areas</b>	
Assam and Mizoram	164.6 km
Assam and Meghalaya	884.9 km
Assam and West Bengal	127.0 km
Assam and Tripura	46.3 km
Assam and Manipur	204.1 km
Assam and Arunachal Pradesh	804.1 Km
Assam and Nagaland	512.1 km

**Wrapping Up**

- The current political scenario in the Northeast reveals that new forms of conflict have been added to the existing ones. A way out of this enduring turmoil requires the Northeastern peoples to accept this challenge as an opportunity. Furthermore, the Union Government needs to intervene to ensure peace and calm to the border regions and allow the state government to remain law and order in their respective states.

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# INDIA AND RCEP

## CONTEXT

In a latest development, 15 countries solidified their participation in the Regional Comprehensive Economic Partnership (RCEP). Even as India opted to stay out after walking out of discussions last year, the new trading bloc has made it clear that the door will remain open for India to return to the negotiating table.

### ◎ BACKGROUND

- The RCEP was first proposed at the 19th ASEAN meet in November 2011 with an aim to create a consolidated market for the 10 member countries and their trade partners.
- Negotiations to chart out this deal had been on since 2013, and India was expected to be a signatory until its decision last November.
- India pulled out of the agreement last year over concerns about cheap Chinese goods entering the country and was a notable absentee during Sunday's virtual signing.
- It can join at a later date if it chooses.
- Even without India, the deal covers more than two billion people.
- The agreement to lower tariffs and open up the services trade within the bloc does not include the United States and is viewed as a Chinese-led alternative to a now-defunct Washington trade

initiative.

### ◎ ANALYSIS

#### What is RCEP?

- Described as the "largest" regional trading agreement to this day, RCEP was originally being negotiated between 16 countries — ASEAN members and countries with which they have free trade agreements (FTAs), namely Australia, China, Korea, Japan, New Zealand and India.
- RCEP is essentially a China-led initiative for a regional trading bloc that will comprise of one third of the world's population and 29% of the world's GDP.
- The purpose of RCEP was to make it easier for products and services of each of these countries to be available across this region.



- The purpose of this trading partnership is to give preferential treatment for trade between the member countries either through lower tariffs, preferential market access, customs union or free trade in specific sectors.

### Why did India pull out of the mega deal?

- On November 4, 2019, India decided to exit discussions over “significant outstanding issues”.
- India had been “consistently” raising “fundamental issues” and concerns throughout the negotiations and was prompted to take this stand as they had not been resolved by the deadline to commit to signing the deal.
- Its decision was to safeguard the interests of industries like agriculture and dairy and to give an advantage to the country’s services sector.
- The current structure of RCEP still does not address these issues and concerns.

### China’s Factor

- Escalating tensions with China are a major reason for India’s decision.
- While China’s participation in the deal had already been proving difficult for India due to various economic threats, the clash at Galwan Valley has soured relations between the two countries.
- The various measures India has taken to reduce its exposure to China would have sat uncomfortably with its commitments under RCEP.
- Major issues that were unresolved during RCEP negotiations were related to the exposure that India would have to China.
- This included India’s fears that there were “inadequate” protections against surges in imports.
- It felt there could also be a possible circumvention of rules of origin— the criteria used to determine the national source of a product — in the absence of which some countries could dump their products by routing them through other countries that enjoyed lower tariffs.
- India was unable to ensure countermeasures like an auto-trigger mechanism to raise tariffs on products when their imports crossed a certain threshold.
- It also wanted RCEP to exclude most-favoured nation (MFN) obligations from the investment chapter, as it did not want to hand out, especially to countries with which it has border disputes, the benefits it was giving to strategic allies or for geopolitical reasons.
- India felt the agreement would force it to extend benefits given to other countries for sensitive sectors like defence to all RCEP members.

- RCEP also lacked clear assurance over market access issues in countries such as China and non-tariff barriers on Indian companies.
- How India’s decision can impact itself?
- **Impact on bilateral trade:** There are concerns that India’s decision would impact its bilateral trade ties with RCEP member nations, as they may be more inclined to focus on bolstering economic ties within the bloc.
- **Less scope to tap large market:** The move could potentially leave India with less scope to tap the large market that RCEP presents —the size of the deal is mammoth, as the countries involved account for over 2 billion of the world’s population.
- **Impact on pact in the Indo-Pacific:** Given attempts by countries like Japan to get India back into the deal, there are also worries that India’s decision could impact the Australia-India-Japan network in the Indo-Pacific. It could potentially put a spanner in the works on informal talks to promote a Supply Chain Resilience Initiative among the three.

### Assessing trade between India and RCEP members

- However, India’s stance on the deal also comes as a result of learnings from unfavourable trade balances that it has with several RCEP members, with some of which it even has FTAs.
- An internal assessment by the government has revealed that the growth in trade (CAGR) with partners over the last five financial years was a modest 7.1%.
- While “there has been growth rate in both imports from and exports to these FTA partners”, the “utilisation rate” of FTAs both for India and its partners has been “moderate” across sectors, which covers pacts with Sri Lanka, Afghanistan, Thailand, Singapore, Japan, Bhutan, Nepal, Republic of Korea and Malaysia.
- India has trade deficits with 11 of the 15 RCEP countries, and some experts feel that India has been unable to leverage its existing bilateral free trade agreements with several RCEP members to increase exports.

### What lies ahead?

- India, as an original negotiating participant of RCEP, has the option of joining the agreement without having to wait 18 months as stipulated for new members in the terms of the pact.
- RCEP signatory states said they plan to commence negotiations with India once it submits a request of its intention to join the pact “in writing”, and it may participate in meetings as an observer prior to its accession.

- However, the possible alternative that India may be exploring is reviews of its existing bilateral FTAs with some of these RCEP members as well as newer agreements with other markets with potential for Indian exports.
- Over 20 negotiations are underway.
- India currently has agreements with members like the ASEAN bloc, South Korea and Japan and is negotiating agreements with members like Australia and New Zealand.
- Two reviews of the India-Singapore CECA have been completed; the India-Bhutan Agreement on Trade Commerce and Transit was renewed in 2016; and the India-Nepal Treaty of Trade was extended in 2016.
- Eight rounds of negotiations have been completed for the review of the India-Korea CEPA, which began in 2016.

- India has taken up the review of the India-Japan CEPA and India-ASEAN FTA with its trading partners.
- There is also a growing view that it would serve India's interest to invest strongly in negotiating bilateral agreements with the US and the EU, both currently a work in progress.

### Wrapping up

- RCEP has now been signed without India. The ramifications of India's decision to opt out of RCEP will be tested. When India chose to stay out of the Belt and Road Initiative in 2017, there was much commentary that New Delhi might be isolating itself. Three years later, India's position has been recognised by like-minded democracies, and many have said that India's decision was prescient.

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# DRUG-RESISTANT INFECTIONS: THE SILENT PANDEMIC

## CONTEXT

Antimicrobial resistance (AMR) threatens the effective prevention and treatment of an ever-increasing range of infections caused by bacteria, parasites, viruses and fungi. In line with the World Antibiotic Awareness Week 2020, it is important to understand how drug-resistant infections are evolving.

As the world reels from the impact of COVID-19, it would be a tragedy not to apply the lessons we are learning to the fight against drug resistance.

### What is World Antibiotic Awareness Week?

- **World Antibiotic Awareness Week** is celebrated annually from 18 to 24 November.
- The week raises the consciousness about antibiotic resistance and how the medical community is educating us about the proper use of these disease-fighting drugs.
- Antibiotic resistance has existed since life began, but has recently accelerated due to human use.
- Today, it is a growing global health threat. Preventing it takes smart choices at the local level.

### What is antibiotic resistance?

- The terms antimicrobial and antibiotic are used interchangeably but in general when we talk about AMR, we are referring to antibiotic resistance.
- The World Health Organization (WHO) defines it this way: "Antibiotic resistance occurs when bacteria change in response to the use of these medicines. Bacteria, not humans or animals, become antibiotic-resistant."

### What are Antibiotics?

- Antibiotics are natural or synthetic substances that inhibit the growth of or destroy bacteria.
- The discovery of antibiotics has revolutionised health care and prolonged life expectancy across the globe.
- The misuse and overuse of antibiotics has the potential to contribute to development of AMR globally.
- Prudent use of antibiotics can help stop resistant bacteria from developing and help keep antibiotics effective for the use of future generations.

### Bacteria under stress

- Exposure to antibiotics puts stress on bacteria and, like other living organisms, they defend themselves.
- Bacteria do this by sharing and acquiring defence genes, often from other bacteria in their environment.
- This allows them to change quickly, readily obtaining the ability to make proteins and other molecules that block the antibiotic's effect.
- This gene sharing process is natural and is a large part of what drives evolution.
- However, as we use ever stronger and more diverse antibiotics, new and more powerful bacterial defence options have evolved, rendering some bacteria resistant to almost everything – the ultimate outcome being untreatable superbugs.
- When one takes an antibiotic, it kills a large majority of the target bacteria at the site of infection – and so the patient gets better.
- But antibiotics do not kill all the bacteria – some are naturally resistant; others acquire resistance genes from their microbial neighbours, especially in digestive systems, throat, and on skin.
- This means that some resistant bacteria always survive, and can pass to the environment via inadequately treated faecal matter, spreading resistant bacteria and genes wider.

### Why is it a 'concern'?

- Drug-resistant 'superbug' infections kill an estimated 700,000 people each year, a number set to rise to 10 million per year by 2050 as drug resistance to antimicrobial agents grows and weakens our ability to treat even common infections.
- A worrying number of infections are becoming harder and extremely complicated to treat due to drug resistance.
- The consequences of not addressing this silent pandemic now could result in a future where we will not be able to treat even common infections like pneumonia, urinary tract infections and infections in newborns.

- The evolving pandemic of drug-resistant infections has the potential to cripple the world in the same way that COVID-19 has done this year.

### How drug resistance spreads in urban environment?

- Chemical residues released from pharmaceutical and personal care products are not only becoming a major contaminant of water bodies in urban areas but are also becoming a source of drug resistance in the environment.
- Occurrence of pharmaceuticals and personal care products, intestine occurring virus, antibiotic resistant bacteria, metal, faecal contamination and antibiotic resistance genes, as well as the long term changes in precipitation and temperature of water.
- These antibiotics make their way into the environment and trigger resistance.
- It is clear that environmental triggers to antibiotic resistance have to be urgently controlled.

### Growing burden of drug resistance

- The worst effect of antibiotic abuse, however, is the growing burden of drug resistance, with more and more bacteria becoming resistant to the drugs.
- India, incidentally, has the highest burden of drug resistance.
- India is already a hub of infectious diseases. Infectious diseases such as pneumonia and diarrhoea accounted for around 50 percent of deaths in children aged less than 5 years in India.
- Drug resistance, in itself, is just not a medical problem but it escalates cost of treatment too.
- Due to growing drug resistance, antibiotic costs, pharmacy costs and the overall cost of treatment were much more in people resistant to drugs rather than those who responded to them.
- Health consequences such as intensive care admissions, complications, mortality, and length of stay were significantly higher in the resistant group as compared to susceptible group.

#### The climatic angle

- It is to be noted that the global antibiotic resistance crisis does not exist in isolation. Other global crises overlap resistance; such as climate change.
- If the climate becomes warmer and dryer in parts of the world with limited sanitation infrastructure, greater antibiotic resistance might ensue due to higher exposure concentrations.

- In contrast, if greater flooding occurs in other places, an increased risk of untreated faecal and other wastes spreading across whole landscapes will occur, increasing antibiotic resistance exposures in an unbounded manner.

### Recent initiatives by Government

- **Global Action Plan on AMR in 2015:** Based on the adoption of the Global Action Plan on AMR in 2015 in the World Health Assembly, member states were urged to develop National Action Plans based on the global framework within 2 years and share data with the WHO on implementation steps and AMR trends.
  - ▶ Though less ambitious efforts existed earlier, the Government of India (GoI) adopted the National Action Plan on AMR (NAP-AMR) in 2017, with the Ministry of Health and Family Welfare (MoHFW) as the nodal ministry and the National Centre for Disease Control (NCDC) as the key surveillance body.
  - ▶ The NCDC has prepared guidelines for the development of State Action Plans but till date, only three states—Kerala, Madhya Pradesh, and Delhi—have prepared and submitted them.
- **Maximum permissible antibiotic residue limits:** In 2018, the Food Safety and Standards Authority of India (FSSAI) introduced **maximum permissible antibiotic residue** limits for meat, fish and milk. Unfortunately, there is no system of standardised testing of animal products before sale and the FSSAI hopes to rely on occasional surprise testing. As a result, frequent investigations by private watchdog groups throw up concerning results.
- **Ban on Colistin:** A significant victory was achieved when the MoHFW banned the use of colistin which is a “last-resort antibiotic” in fish and livestock industries in 2019.
- **Prescribed standards:** In January 2020, the Ministry of Environment, Forest and Climate Change (MoEFCC) published draft standards for antibiotic residues in pharmaceutical industry effluents under the proposed Environmental (Protection) Amendment Rule 2019.
- These standards propose stringent limits for 121 antibiotics and are applicable to both standalone manufacturing units as well as common effluent treatment plants (CETPs) catering to the pharmaceutical industry.
- If finally notified, India will become the first country in the world with such standards.

### Suggestive measures

- **Integrated cooperation:** While solutions to antibiotic resistance exist, integrated cooperation between science and engineering, medicine, social action, and governance is lacking, which needs to be the centre focus.
- **Collaborative global efforts:** While many international organisations acknowledge the scale of the problem, unified global action is not happening fast enough. The focus should be given to collaborative global efforts.
- **Strategy for all causes:** Science continues to reveal probable causes of antibiotic resistance, which shows no single factor drives resistance evolution and spread. As such, a strategy incorporating medicine, environment, sanitation, and public health is needed to provide the best solutions.
- **Working in accordance with UN SDGs:** Governments throughout the world must act in unison to meet targets for sanitation and hygiene in accordance with the UN Sustainable Development Goals.

- **Improved sanitation and hygiene:** Regardless of context, improved water, sanitation, and hygiene must be the backbone of stemming the spread of AMR, including antibiotic resistance, to avoid the next pandemic.

### CONCLUSION

The novel coronavirus disease (COVID-19) has been our first experience of a pandemic in a generation that has been both, devastating and far-reaching. With limited tools to prevent or treat COVID-19, the pandemic has disrupted health systems and global economies in ways the world has not seen before. Despite solutions being at hand, a similar situation could be on the cards for the evolving pandemic of drug-resistant infections. The world needs unless urgent action to address lack of access to antibiotic treatments. We should use this time as an opportunity to avert this potential catastrophe through strong leadership, collaboration and investment in measures to counteract the threat of drug resistance.

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# PROPOSITION 22, THE FUTURE OF THE GIG ECONOMY

## CONTEXT

- **Proposition 22, a ballot measure that will allow these companies to retain their drivers and other workers as “independent contractors” instead of “employees”, has been passed, setting a new high-water mark for spending on a California ballot measure.**
- **As a result, gig workers for Uber, Lyft, DoorDash, Instacart and Postmates in the state will remain as independent contractors, rather than being subject to being reclassified as employees under AB5, the state’s gig-work law.**

## ◎ BACKGROUND

- When companies such as Uber and Lyft first started in California in the 2010s, they did not hire drivers as employees, and instead classified them as independent contractors.
- For drivers, the gig work was supposed to bring greater flexibility than traditional employment.
- The industries argued that they were technology companies, and said that they should not be burdened with the legal requirements applicable to transportation companies.
- Under California’s labour law, this business model was controversial from the beginning, since the companies did not provide drivers and other workers unemployment insurance, health care, sick leaves or guaranteed pay– the binding responsibilities of an employer.
- The gig business model came under attack in 2018, when the California Supreme Court in its **landmark ‘Dynamex’ ruling** changed the law which decided whether workers were employees or contractors, reducing the threshold for a worker to be categorised as an employee.
- As per the verdict, workers were to be treated as employees in every case, except if they were:
  - ▶ free from the control and direction of the hirer
  - ▶ performed work outside the usual course of the hirer’s business
  - ▶ were engaged in their own independent business
- The California legislature saw the Dynamex judgment as a welcome move which could rein in the burgeoning gig industry, and in 2019 enshrined it in a state law called **Assembly Bill 5 (AB5)**, which went into effect in January 2020.
- The app-based companies saw the **AB5 law** as a direct threat to their business, and came together to draft a **ballot proposal**– a legal measure available in several US states by which citizens can suggest propositions to be put to

popular referendum in the state, bypassing the legislature.

## ◎ ANALYSIS

### What is ‘Prop 22’?

- Proposition 22 is a ballot measure that defines ride-share and delivery drivers as independent contractors instead of as employees. It is a direct rebuke to Assembly Bill 5.
- Thus, it permits the adoption of labor and wage policies specific to the app-based drivers, free from comprehensive protections normally given to workers classified as employees.
- It asked voters whether gig workers should have flexibility or stability, and was to go on the ballot on November 3.
- Meanwhile, the companies ignored AB5, and Uber and Lyft threatened to leave the California market.
- The gig industries poured money into their ‘Yes on Prop. 22’ campaign, raising over \$200 million– the most in California’s history on a proposition campaign — to get voters on their side.
- The companies launched aggressive in-app messages, and stickers were pasted on Uber vehicles and on bags of online grocery service Instacart.
- The companies claimed most of their drivers, a million Californians, would prefer the flexibility of contract work over the stability of employee benefits.
- They argued that if this proposal did not pass, drivers would be forced to become full-time or leave the platform, and prices would increase.
- Those opposed to the proposition, such as labour unions, argued that drivers should get full employee protections, and criticised the companies for trying to write their own labour laws. Then-Democratic nominee Joe Biden endorsed this side.

### What is Gig Economy?

- A gig economy is a free market system in which temporary positions are common and organizations hire independent workers for short-term commitments.
- The term "gig" is a slang word for a job that lasts a specified period of time; it is typically used by musicians.
- Non-traditional or gig work consists of income-earning activities outside of traditional, long-term employer-employee relationships.

### The Pros and Cons of Gig Work

- Pros of Gig Work
  - ▶ **Flexibility:** The most obvious gig work pro is flexibility. The worker himself choose when and where he wants to work.
  - ▶ **Test Drive Something New:** Gig work is something some people do for additional income. But for other people, it's a way to test-drive a new career.
  - ▶ **Greater independence**
  - ▶ A variety of jobs
- Cons of Gig Work
  - ▶ **Lack of Benefits:** Once you're in business for yourself, you're in business for yourself. And that means it's up to you to provide the benefits. And, as a gig worker, you likely won't have health insurance or other benefits, either.
  - ▶ **Inconsistent Income:** With most gig jobs, one is paid by the project or task. The income remains inconsistent.
  - ▶ **Burnout:** Working multiple jobs or at odd hours isn't for everybody. Some people find that as flexible as the work is, gig work becomes tiring and stressful after a while.
  - ▶ **Quarterly taxes, personal expenses**

### What has happened?

- In California, America's most populous state, the referendum appeared on the ballot of the 2020 US election (on November 3), and was approved with 58 per cent of the vote.
- For months, the initiative had been pushed by app-based companies in the West Coast state, and was opposed by labour organisations who were seeking greater protections and benefits for gig workers.

- While the recent vote only affects **labour law** in California, it is expected to lay out a path for similar initiatives across the country.
- **What the passing of Proposition 22 means?**
- **Stability in business model:** The popular approval of Proposition 22 is seen as a major achievement for app-based companies, as it brings stability to their contract-based business model, especially since many of them, such as Uber and Lyft, are yet to turn a profit.
- **Independent working:** Prop 22 also brings some advantages for gig workers. They would be able to work independently, but with new benefits such as minimum pay, vehicle insurance and some health care options.
- The place of their victory is also of particular importance. California, which is the largest state economy in the US, makes up over 14 per cent of the country's \$19 trillion GDP. Enthused, the gig industry has already announced that it would seek to replicate the measure in other states.

### The other side of the coin

- Critics, however, accuse the ballot measure of undoing the achievements of the labour movement of over a century.
- With the success of Prop 22, the traditional businesses in the US would follow the same path as app-based companies to reduce costs – only choosing to hire gig workers and not offer full employment.
- It will lead to potentially undermining the basic worker protections that a large section of the population currently enjoys.
- Prop 22 is also criticised for undermining the democratic process. Because of a provision contained in the ballot measure, the California legislature would now require a seven-eighths majority– an unusually high bar– to make any legal amendments affecting gig workers.
- Wrapping up
- Proposition 22 turned out to be the most expensive ballot initiative in the Golden State's history. Now more than ever, with the devastating pandemic, subsequent tumultuous recession, it is imperative the fight to reclassify hard working app-based drivers as employees carries on despite the defeat in California. All workers need to be cared for, treated with respect and provided sufficient compensation and protections for their labor.

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# HOW IS ETHICAL AI DIFFERENT FROM FAIR AI

## CONTEXT

- **Artificial intelligence is growing at a rapid pace to the point where it is making important decisions for every sector of society.**
- **However, there is a very fine line between ethical AI and a fair AI. It becomes difficult to differentiate, as they also overlap at a few points.**

## ◎ BACKGROUND

- One of the biggest challenges that AI systems face is in regard to its ethics and fairness in its operations.
- The best ways to demonstrate this would be the example of the secret AI tool that was used for recruitment purposes in e-commerce giant Amazon in 2014.
- Only a year later, the organisation realised that the AI system was partial towards male candidates since it was trained to vet applications by observing patterns in resumes submitted to the company over ten years; most of these applications were from men.
- Case of missed opportunity.
- In order to understand these challenges, it is first necessary to differentiate between two aspects — ethics and fairness.
- Ethical AI and fair AI are often used interchangeably, but there are few differences.

## ◎ ANALYSIS

### Ethical AI vs Fair AI

The concept of machine morality, especially in the case of AI, has been explored by computer scientists since the late 1970s. These research are mainly aimed at addressing the ethical concerns that people may have about the design and application of AI systems. To formally define, at the core of ethical AI, the idea is that it should never lead to rash actions, the result of poor learning, that could impact human safety and dignity.

Following are some of the main and strong suites of an Ethical AI system, which are accepted and prescribed prominent field players such as Microsoft.

- **Technical robustness, reliability, and safety:** It is important to build robust AI systems that are resilient to adversarial attacks. Such attacks manipulate the behaviour of the system by making changes to the input or training data. In worse case scenarios, these attacks can prove fatal to the environment they are in. Additionally, an ethical AI system should also be able to fallback

from a 'rule-based system' and ask for human intervention to prevent it from going rogue.

- **Privacy and security:** An ethical AI system must guarantee privacy and data protection throughout its lifecycle, which includes the information provided initially by the user and that generated during the course of interaction with the system. This is quite a slippery slope. Since these systems primarily rely on data, they are always hungry for new information. There have been multiple reports of tech giants, intentionally or otherwise, tapping into users' sensitive information.
- **Transparency:** The guidelines from the European Commission released in 2019, defined AI transparency in three subparts: traceability, explainability, and communication. Vendors must make the decision-making capabilities of the AI device transparent to the users to protect against any possible harm against humans or their rights.
- **Fairness and inclusivity:** Bias is one of the major problems with AI systems. These systems internalise the choice of the researchers, building them and further amplify them. Experts believe that to build a system completely devoid of such bias is impossible. However, there are a few steps that could be taken to minimise them, including using inclusive datasets to train these machines on.
- **Accountability:** An ethical AI has mechanisms that ensure responsibility and accountability, not just during its creation but also after development, deployment and use. Companies must adhere to rules and regulations to make sure that their systems conform to ethical principles.

### So, what exactly is 'fair AI'?

- Having seen what an ethical AI system means, it is easy to infer that fairness is prominent yet just a part of it.
- A fair AI refers to an attribute of ethical AI in the larger sense.
- To define, fair AI refers to probabilistic decision support that prevents it from unfairly harming or benefiting a particular.
- There are multiple reasons as to why 'unfairness'

creeps into a system: the data the system learns from, the way algorithms are designed, and modelling by way of selecting relevant features as inputs and combining them in meaningful ways.

### Need for Ethics and Regulation

- AI is a technological wave that has taken over the market across the globe and has seeped through the Indian markets as well.
- Even though India has not advanced to the level of providing citizenship to a robot like Sophia from Saudi Arabia, personalised chatbots have flooded the market.
- With greater explorations into the space of AI, the world is moving towards a goal of near-complete automation of services. AI is wholly based on data generated and gathered from various sources.
- The two main concerns that prominently come into picture are :
  - ▶ who owns the data about the users, and how that data is used to further power AI based apps, services and platforms
  - ▶ What are the circumstances if the machine makes biased decisions or provides an incorrect response. If the chatbot does not respond correctly once deployed by the business, a human fallback is provided to correct the error based on the data generated and provided by the business.
- This is where the question of the ethics of AI comes into the picture, which the government needs to tackle with some amount of regulation.
- A systematic mechanism and policies are needed to understand how these algorithms are written and how the data collected can be safeguarded and perhaps tracked to prevent breach.

### AI Laws Across the Globe

- **Australia:** In the 2018–2019 budget, the government of Australia set aside AU\$29.9 million to support the development of AI in Australia.
- **Canada:** The element of end-to-end ‘human involvement’ has been insisted upon by most AI advanced countries such as Canada, in order to ensure accountability and security of AI systems. At the same time, they will create a Technology Roadmap, a Standards Framework and a national AI Ethics Framework to support the responsible development of AI.
- **China:** In 2017, China had unveiled what is called ‘A Next Generation Artificial Intelligence Development Plan’, which sets a ground for as far as the year 2030 with regards to development of AI in China and also the regulations and ethics to promote development of AI.
- **European Union:** In 2018, the European Union outlined the Communication on Artificial Intelligence document which among other issues, outlines the need to have an ethical and legal framework in place — and will prepare the draft guidelines which member countries would most likely adopt as is, or with certain localized changes.

### ◎ CLOSURE

Though, it is impossible to construct a 100% universally fair or unbiased system. Partly because there are up to 20 different mathematical definitions of fairness, however, organisations can design AI systems to meet specific goals, thus mitigating the unfairness and creating a more responsible system overall. Companies need to realise the difference between the two to develop a system that best suits their operation and creates an overall responsible AI system.

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## CREATE MECHANISM TO ADDRESS GRIEVANCES AGAINST FAKE NEWS: SC TO CENTRE

◎ **CONTEXT:** Expressing its disappointment with the Centre's affidavit on action taken against the circulation of fake news, the Supreme Court directed the government to create a mechanism for addressing grievances against such news that is circulated by television channels and other media.

◎ **ABOUT:**

- Fake news is broadly defined as false or misleading information masquerading as legitimate news.
- "Fake news" is a term used to refer to fabricated news. Fake news is an invention – a lie created out of nothing – that takes the appearance of real news with the aim of deceiving people.
- The term has been applied to satire, propaganda, biased reporting, sponsored or promoted content, factually incorrect reporting, entirely fabricated stories, or simply inconvenient truths.
- Why India's fake news virus is more lethal?
- The crisis of fake news is much more severe in India largely because of the country's rapidly growing social media base and sloppy regulation of social media platforms.
- With as much as 376 million people using all kinds of social media platforms, India is on the radar of most social media companies with a rapidly growing internet base.
- However, compared to many countries, a large number of Indians are more susceptible to fake news and disinformation campaigns.

### What is the role of social media functionalities?

- Social media platforms are a double-edged sword-
- On the one hand, they allow for social connectedness in a time of social distancing.
- On the other, functionalities that facilitate "conversation" and, "sharing" contrarily lead to a decline in reflective thinking, inducing the sharing of quick and superficial thoughts and the speedy diffusion of unverified facts.
- In turn, users become both contributors and victims of misinformation.
- "Forwarding", "sharing", and "retweeting" content allows users to exchange, distribute, and receive content at an unprecedented level.

### Protected Speech and its Limits

- **Article 19(1)(a)** guarantees citizens the freedom of speech.
- **Article 19(2)** allows for "reasonable restrictions" in the interests of *inter alia*: (i) the sovereignty/integrity of India; (ii) the security of the State; (iii) public order; (iv) decency or morality; (v) defamation; or (vi) incitement to an offence.
- Speech in India can be restricted because of its *consequences*, that it may lead to violence, but also because of the speech's *content* – that the meaning conveyed is deemed legally objectionable.
- Any restriction on speech must have a proximate connection with a *specific* head set out in **Article 19(2)**.
- The government cannot restrict speech merely in the 'public interest', or because it is 'false', neither of which are heads under **Article 19(2)**.
- Therefore, if the government wanted to restrict "fake news" it would need to prove that "fake news" either caused harm because of its content (defamation, decency or morality) or that it was inciteful leading to violent consequences (public order, incitement to an offence).

## MIZORAM BRU REFUGEES DEMAND IMMEDIATE IMPLEMENTATION OF SETTLEMENT PACT

- ◎ **CONTEXT:** Leaders of the Mizoram Bru refugees have demanded commencement of their permanent rehabilitation in Tripura in the light of the quadripartite agreement signed in New Delhi in January.

### What is in the Bru agreement?

- All Bru currently living in temporary relief camps in Tripura will be settled in the state, if they want to stay on.
- The Bru who returned to Mizoram in the eight phases of repatriation since 2009, cannot, however, come back to Tripura.
- Under the agreement, the Bru refugees will be settled in Tripura. They will get all the rights that the residents of the state enjoy, including social welfare schemes of both Centre and state governments.
- Each of the displaced families will also be given 40×30 sq.ft. residential plots, in addition to the aid under a 2014 repatriation agreement of a fixed deposit of Rs 4 lakh, Rs 5,000 cash aid per month for 2 years, free ration for two years and Rs 1.5 lakh to build their house.
- The Tripura government will provide the land as per this agreement.

### Who are Brus?

- Bru or Reang is a community indigenous to Northeast India, living mostly in Tripura, Mizoram and Assam.
- In Tripura, they are recognised as a **Particularly Vulnerable Tribal Group**.
- In Mizoram, they have been targeted by groups that do not consider them indigenous to the state.

### How the crisis originated?

- The Bru community, also referred to as Reangs, resides in Mizoram, Tripura, and parts of southern Assam, and is ethnically distinct from the Mizos.
- The first signs of conflict between the two communities emerged in 1995 when Mizo organisations — the Young Mizo Association and the Mizo Students' Association — demanded that Brus be left out of the state's electoral rolls as they were not an indigenous tribe.
- The Brus retaliated by forming an armed organisation, Bru National Liberation Front, and a political body, Bru National Union. The two demanded more political autonomy for Mizoram's Brus and a Bru Autonomous District Council under the Sixth Schedule of the Constitution.
- In 1997, following ethnic tension over an incident in Mizoram, around 5,000 families comprising over 30,000 Bru tribals were forced to flee the state and seek shelter in Tripura, where they were housed in temporary camps at Kanchanpur.

## APEC AGREE ON FREE TRADE

- ◎ **CONTEXT:** Leaders from the Asia-Pacific Economic Cooperation forum, including US, have pledged to work toward free, open and non-discriminatory trade and investment to revive their coronavirus-battered economies.

## ◎ ABOUT:

### What is APEC?

- The Asia-Pacific Economic Cooperation (APEC) is a regional economic forum established in 1989 to leverage the growing interdependence of the Asia-Pacific.
- APEC ensures that goods, services, investment and people move easily across borders.
- Members facilitate this trade through faster customs procedures at borders; more favorable business climates behind the border; and aligning regulations and standards across the region.

### Who are the member countries?

- APEC's 21 members aim to create greater prosperity for the people of the region by promoting balanced, inclusive, sustainable, innovative and secure growth and by accelerating regional economic integration.
  - Together, these 21 economies currently represent the most dynamic economic region in the world with 40% of world's population, 60% of global GDP and 50% of total trade.

### RCEP & TPP: Two parallel structures

- APEC stands for a larger free-trade philosophy, but it is up to the member states to give flesh out the details of what it means in practical terms.
- This is starting to happen, but already two structures that are emerging within APEC reflect the growing rivalry between China and Washington: the Regional Comprehensive Economic Partnership (RCEP) and the Trans Pacific Partnership (TPP).
- RCRP was first launched in 2012 by ASEAN and six of its partners, including China, Australia, India Japan.
- As a reaction the US started to aggressively build on another structure, the TPP, that was first initiated by Brunei, Chile, Singapore and New Zealand in 2005.
- In an attempt to create a single market for the U.S. and 11 countries that border the Pacific Ocean, including Canada, Mexico, and Chile, Washington jumped in. The TPP in its new form was proposed by US President Barack Obama and signed in February 2016.

### Key-highlights of the meeting

- APEC leaders adopted the **Putrajaya Vision 2040**, a new 20-year growth vision to replace the Bogor Goals.
  - The Bogor Goals, One of APEC's flagship initiatives, were released in 1994 for members to move towards the long-term goal of free and open trade and investment in the Asia-Pacific region no later than the year 2020.
- They pledged to build an "open, dynamic, resilient and peaceful region" by 2040, and tasked officers to draw up implementation plans by next year.

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## INDIA-LUXEMBOURG'S FIRST SUMMIT IN TWO DECADES

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## ◎ CONTEXT:

**India-Luxembourg hold first summit in two decades; pitched for strengthening of cooperation in a range of areas like financial and digital technologies.**

### Key-highlights of the Summit

- India and Luxembourg, which share diplomatic relations that date back to 1929, hold their first stand-alone Summit.

- Both countries signed 3 major pacts. The three agreements signed included pacts between the
  - Luxembourg Stock Exchange with the State Bank of India and
  - Luxembourg Stock Exchange and the India International Stock Exchange
  - LuxInnovation and Invest India
- India welcomed Luxembourg's announcement to join the **International Solar Alliance (ISA)**.
  - The ISA, initiated by India, is an alliance of over 120 countries which is focused on working for efficient consumption of solar energy to reduce dependence on fossil fuels.
- India also invited Luxembourg to join the **Coalition for Disaster Resilient Infrastructure (CDRI)**.
- Both countries are looking to ramp up cooperation in the space sector. Discussions are on for an agreement between the ISRO and the space agency of Luxembourg.

### Significance of the signed Agreement

- The agreement will provide for cooperation in the financial services industry. It will enable the maintenance of security markets in both countries with a focus on ESG (environmental, social and governance) and green finance in the local market.
- The agreement with LuxInnovation will support and develop mutual business cooperation between India and Luxembourg companies.

### Why Luxembourg is important for India?

- **Source of FPI:** Luxembourg is a key country in the European Union (EU), and is also the third largest source of FPI in India after US and Mauritius accounting for approximately 8.5 per cent of these investments.
- **Steel sector:** India and Luxembourg have a longstanding cooperation in the steel sector.
- Luxembourgish company Paul Wurth has been in India for the last two decades and played an important role in upgrading the steel sector in India in collaboration with SAIL, TISCO and Jindal Steel.
- ArcelorMittal, the world's largest steel-producing company, is based out of Luxembourg and recently entered into a joint-venture in India, partnering with Nippon Steel.
- **Important financial centres:** Luxembourg is one of the most important financial centres globally. Several Indian companies have raised capital by issuing Global Depository Receipts (GDRs) at the Luxembourg Stock Exchange.
- Several Luxembourg-based investment funds hold substantial banking and asset management market share in portfolio investments in India.

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## IRAN SAYS IT WILL 'AUTOMATICALLY' FULFILL NUCLEAR COMMITMENTS IF US LIFTS SANCTIONS

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- ◎ **CONTEXT:** Iran said that it would "automatically" fulfil the nuclear commitments if US rejoins the Nuclear Accord of 2015 and lifts sanctions.
- ◎ **ABOUT:**
  - In 2015, Iran agreed a long-term deal on its nuclear programme with a group of world powers known as the P5+1 - the US, UK, France, China, Russia and Germany.
  - It came after years of tension over Iran's alleged efforts to develop a nuclear weapon. Iran insisted that its nuclear programme was entirely peaceful, but the international community did not believe that.

- The Iran nuclear deal, formally known as the Joint Comprehensive Plan of Action, offered Tehran billions of dollars in sanctions relief in exchange for agreeing to curb its nuclear program.
- Under the accord, Iran agreed to limit its sensitive nuclear activities and allow in international inspectors.
- Other countries that signed the deal with the U.S., including allies France, Britain and France, called on Washington to stick to the agreement.
- The deal was sealed under President Barack Obama.
- Why US quit the deal?
- As of May 2018, there was broad consensus that Iran has abided by the agreement.
- Israeli Prime Minister Benjamin Netanyahu, however, has alleged that "Iran lied" about its nuclear weapon ambitions in the 2000s, although the information he shared seemed to match up with what nuclear inspectors had already reported about Tehran's program.
- On May 8, 2018, Trump announced the U.S. would reimpose sanctions on Iran, leaving other nations involved scrambling to salvage the pact.
- Restoring sanctions amounts to a U.S. breach of the original deal whereas Iran was deemed to be compliant, according to international nuclear inspectors.

#### Is the deal mutually beneficial?

- Both countries have an interest in bringing each other to the negotiation table and finally reaching an agreement.
- **Iranian front:** For Iran, the time is perfect for diplomatic talks because of an ongoing crisis caused by the crippling U.S. sanctions and the Covid-19 pandemic.
- The already struggling Iranian economy has been brought to the brink of collapse, exacerbated by low oil prices.
- Engaging Washington in negotiations and halting its nuclear program in exchange for sanctions relief might be the only option Tehran has if it wishes to emerge from a devastating socio-financial crisis.
- **American front:** On the American front, structural forces are rapidly shifting U.S. priorities in the Middle East, from which it is trying to disengage.
- If Washington decides to seriously disengage from the Middle East before reaching an agreement, a nuclear-powered Iran would attempt to fill the power vacuum left behind in the region, which is precisely what Americans have been trying to prevent for the past four decades.
- Moreover, incessant and harsh U.S. sanctions could lead Iran to find other trade partners (such as Syria, China, and Russia), which would, in turn, hurt America's economy and its geopolitical agenda and exacerbate this potential situation.
- As such, it turns out that both Iran and the United States have more to lose from the current status quo than from a scenario wherein they finally reach a diplomatic agreement.

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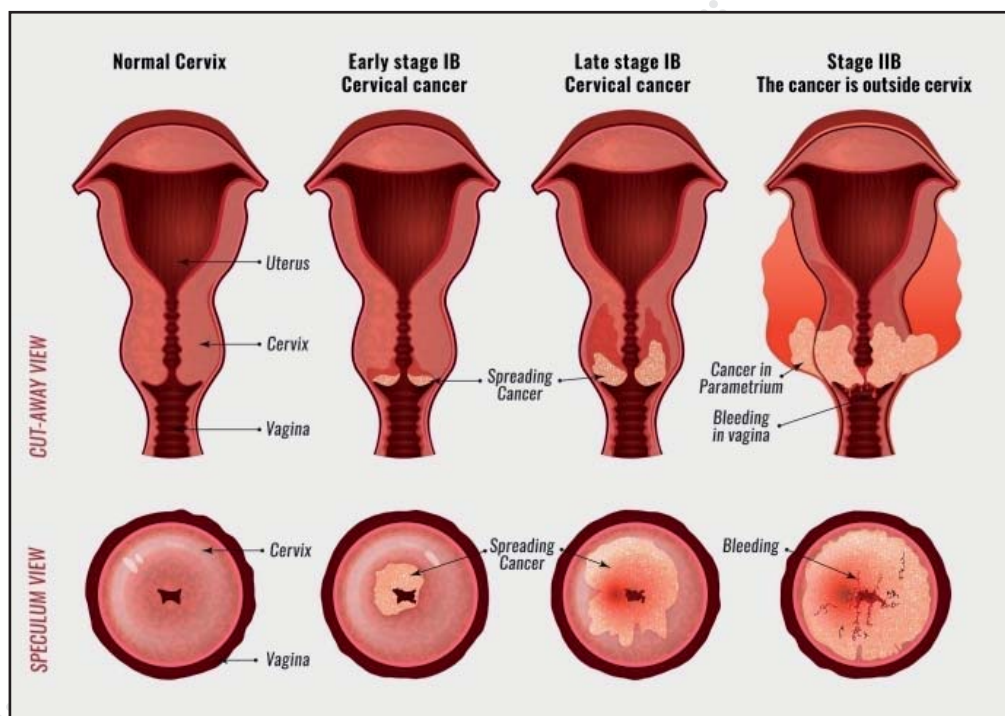
## WHO COMMITS TO ELIMINATE CERVICAL CANCER GLOBALLY

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- © **CONTEXT:** In a first, the World Health Organisation's (WHO) launched the *Global Strategy to Accelerate the Elimination of Cervical Cancer*.
- © **ABOUT:**
  - Cervical cancer develops in a woman's **cervix** (the entrance to the uterus from the vagina).



- Almost all cervical cancer cases (99%) are linked to infection with **high-risk human papillomaviruses (HPV)**, an extremely common virus transmitted through sexual contact.
- Although most infections with HPV resolve spontaneously and cause no symptoms, persistent infection can cause cervical cancer in women.
- **Effective primary (HPV vaccination)** and secondary prevention approaches (screening for, and treating precancerous lesions) will prevent most cervical cancer cases.
- When diagnosed, cervical cancer is one of the most successfully treatable forms of cancer, as long as it is detected early and managed effectively.
- Cancers diagnosed in late stages can also be controlled with appropriate treatment and palliative care.
- With a comprehensive approach to prevent, screen and treat, cervical cancer can be eliminated as a public health problem within a generation.



### Cervical Cancer Types

- There's more than one kind of cervical cancer.
- **Squamous cell carcinoma:** This forms in the lining of your cervix. It's found in up to 90% of cases.
- **Adenocarcinoma:** This forms in the cells that produce mucus.
- **Mixed carcinoma:** This has features of the two other types.

#### The numbers

- Cervical cancer is the fourth most common cancer in women.
- The annual number of new cases of cervical cancer are expected to increase to 700,000 from 570,000 between 2018 and 2030.
- The annual number of deaths is projected to rise to 400,000 from 311,000.

### Key-highlights of the Programme

- The programme aims to complete the following targets by 2030 globally:

- 90 per cent girls fully vaccinated with the **Human papillomavirus (HPV) vaccine** by 15 years of age
- 70 per cent women screened using a high-performance test by 35 years and again by 45 years
- 90 per cent of women identified with cervical disease receive treatment (90 per cent of women with pre-cancer treated and 90 per cent of women with invasive cancer managed).
- Another highlight of the strategy is to stress on investing in interventions to meet these targets that can generate substantial economic and societal returns.
- WHO estimates that \$ 3.20 will be returned to the economy for every dollar invested through 2050 and beyond if women's workforce participation increased.

## 2 MORE WETLANDS IN INDIA ADDED TO LIST OF 'RECOGNISED SITES' UNDER RAMSAR CONVENTION

◎ **CONTEXT:** India has 41 wetlands, the highest in South Asia, with two more (the Lonar lake in Maharashtra and Sur Sarovar, also known as Keetham lake, in Agra) added to the list of recognised sites of international importance under the treaty of Ramsar Convention.

◎ **ABOUT:** What is Ramsar Convention?

- The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat is a treaty for conservation and sustainable use of such sites.
- It is named after Ramsar, the Iranian city where the treaty was signed in 1971, and places chosen for conservation under it are given the tag 'Ramsar site'.
- Also known as the Convention on Wetlands, it aims to develop a global network of wetlands for conservation of biological diversity and for sustaining human life.
- Over 170 countries are party to the Ramsar Convention and over 2,000 designated sites covering over 20 crore hectares have been recognised under it.

### Lonar Lake

- Located in Buldhana district, 500 km away from Mumbai, the lake was formed after a meteorite hit the Earth around 50,000 years ago.
- The world's only high velocity impact lake formed in basaltic rock is said to be identified by a British officer CJE Alexander in 1823.

### Sur Sarovar

- Sur Sarovar, also known as Keetham Lake, is a human-made reservoir; originally created to supply water to the city of Agra in summer, the wetland soon became an important and rich ecosystem.
- The poet Surdas is said to have been inspired to write one of India's most famous devotional poems, the Bhakti Kavya, by this place.

### List of recognised sites in India

- The **Asan Conservation Reserve** in Dehradun, the first wetland from Uttarakhand to be recognised by Ramsar convention, was added to the list in October this year.



- The other 38 Ramsar sites in India include Chilika Lake in Odisha, Keoladeo National Park in Rajasthan, Harike Lake in Punjab, Loktak Lake in Manipur and Wular Lake in Jammu and Kashmir.
- In January this year, 10 wetlands in India were recognised by the Ramsar Convention as sites of international importance.
- These are Nandur Madhameshwar in Maharashtra, Keshopur-Miani, Beas Conservation Reserve and Nangal in Punjab, and Nawabganj, Parvati Agra, Saman, Samaspur, Sandi and SarsaiNawar in Uttar Pradesh.
- The other Ramsar sites are in Rajasthan, Kerala, Odisha, Madhya Pradesh, Himachal Pradesh, Assam, West Bengal, Jammu and Kashmir, Andhra Pradesh, Manipur, Gujarat, Tamil Nadu, Tripura and Uttar Pradesh.

### Why to conserve wetland?

- Wetlands provide a wide range of important resources and ecosystem services such as food, water, fibre, groundwater recharge, water purification, flood moderation, erosion control and climate regulation.
- They are, in fact, a major source of water and our main supply of freshwater comes from an array of wetlands which help soak rainfall and recharge groundwater.

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## KARNATAKA TO SOON DECLASSIFY FOREST

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### ◎ CONTEXT:

Karnataka has planned to soon declassify 6.64 lakh hectares of the 9.94 lakh hectares of deemed forests in the state (nearly 67%) and hand it over to Revenue authorities.

### ◎ ABOUT:

#### What are deemed forests?

- A deemed forest fits "dictionary meaning" of a forest, "irrespective of ownership".
- In other words, these are thickly wooded areas recommended to be taken over by the government for preservation as forests but not notified.
- Re-definition of forest: SC
- A Supreme Court judgement in 1996 re-defined the meaning of forests to include all areas with natural forests irrespective of their ownership as well as those that came under the 'dictionary' meaning of forest.
- The Supreme Court in the case of **T N Godavarman Thirumalpad (1996)** accepted a wide definition of forests under the Act.
- "The word 'forest' must be understood according to its dictionary meaning. This description covers all statutorily recognised forests, whether designated as reserved, protected or otherwise for the purpose of Section 2 (1) of the Forest Conservation Act," the Supreme Court said in its December 12, 1996 order.
- "The term 'forest land' occurring in Section 2 will not only include 'forest' as understood in the dictionary sense, but also any areas recorded as forest in the government record irrespective of the ownership. The provisions enacted in the Forest Conservation Act 1980 for the conservation of forest and the matters connected therewith must apply clearly to all forest so understood irrespective of the ownership or classification thereof".

#### How much land in Karnataka is protected under the Forest Act?

- Reports by expert committees in 1997 and 2002 identified 43.18 lakh hectares of forest land for conservation in Karnataka, which included 33.23 lakh hectares notified forest area as per forest records and 9.94 lakh hectares 'deemed forests'.

## TRISTAN DA CUNHA, DECLARED THE LARGEST FULLY PROTECTED MARINE RESERVE

◎ **CONTEXT:** The isolated UK Overseas Territory of Tristan da Cunha, which is home to the world's most remote human settlement, declared the largest fully protected marine reserves in the Atlantic Ocean at 687,000 square kilometres.

◎ **ABOUT:**

- Tristan da Cunha, a British territory, is 2,300 miles east of South America and 1,600 miles west of South Africa.
- Tristan da Cunha, which is inhabited by less than 300 humans is a small chain of islands and the water around the islands are considered to be the richest in the world.
- The island group is also home to the World Heritage Site of Gough and Inaccessible Islands, which is one of the most important seabird islands in the world.

### Marine Protected Areas (MPAs)

- Marine Protected Areas (MPAs) involve the protective management of natural areas according to pre-defined management objectives.
- MPAs can be conserved for a number of reasons including economic resources, biodiversity conservation, and species protection.

Around 8 percent of the world's oceans are designated as MPAs, but only 2.6 percent are totally off limits to fishing.

### Conservation threats

- As remote as it is, Tristan da Cunha is not without its conservation threats. Invasive mice, brought by passing ships, kill about two million birds a year. The first eradication program will take place in 2021.
- The mountainous archipelago Tristan da Cunha is home to tens of millions of seabirds and several unique land birds that are comparable to the Galapagos island finches.
- However, some of its seabirds that are not found anywhere else in the world face threats including illegal and unregulated fishing activities, overfishing, plastic pollution and climate change.
- As of now, there are two critically endangered species in the island group and over five endangered species.

### Benefits from marine protection

- The new marine reserve excludes the designated fishing zones just offshore several islands. Inside the marine reserve, no fishing will be permitted.
- Under the protection of the U.K.'s Blue Belt Programme, Tristan da Cunha will receive more resources for patrolling its waters for illegal fishing activity.

## ARIEL SPACE MISSION

◎ **CONTEXT:** The European Space Agency (ESA) has formally adopted Ariel, the explorer that will study the nature, formation and evolution of exoplanets.

◎ **ABOUT:** What is the Ariel Space Mission?

- Ariel is the first mission of its kind dedicated to measuring the chemical composition and thermal structures of hundreds of exoplanets.

- Ariel (Atmospheric Remote-sensing Infrared Exoplanet Large-survey) will perform a large-scale survey of over a thousand exoplanets over a period of four years.
- These thousand exoplanets will range from gas giants to rocky planets, which will help them to compile a list of their compositions and properties thereby providing insights about how planetary systems form and evolve.
- The mission is expected to be launched in 2029.

### What are Exoplanets?

- Planets that lie outside of the Solar System and orbit around stars other than the Sun are called exoplanets or extrasolar planets.
- Exoplanets are not easy to detect since they are much less brighter than the stars they orbit and hence it is difficult to see them directly using telescopes.

#### The numbers

- As of now the existence of more than 4,000 exoplanets is considered confirmed, while there are thousands of other candidate exoplanets that need further observations to say for certain if they are exoplanets.
- Proxima Centauri b is the closest exoplanet to Earth and is four light-years away and inhabits the “habitable zone” of its star, which means that it could possibly have liquid water on its surface.

### How to track exoplanets?

- As per NASA, only a handful of exoplanets have been found using telescopes and the rest have been detected using indirect methods.
- One of these methods involves tracking the dimming of a star that happens when a planet passes in front of it. NASA’s Kepler Space telescope uses this method to spot thousands of planets.
- Other methods to track exoplanets include gravitational lensing and the “wobbling method”, which is based on the idea that an orbiting planet will cause its parent star to orbit slightly off-centre.

### The need of the mission

- According to the ESA, while a large number of exoplanets have already been discovered, there is no clear link between the presence, size or orbital parameters of the planet and the nature of their parent stars.
- Therefore, a large-scale survey that Ariel will perform is required to know more about exoplanets and exoplanetary systems.

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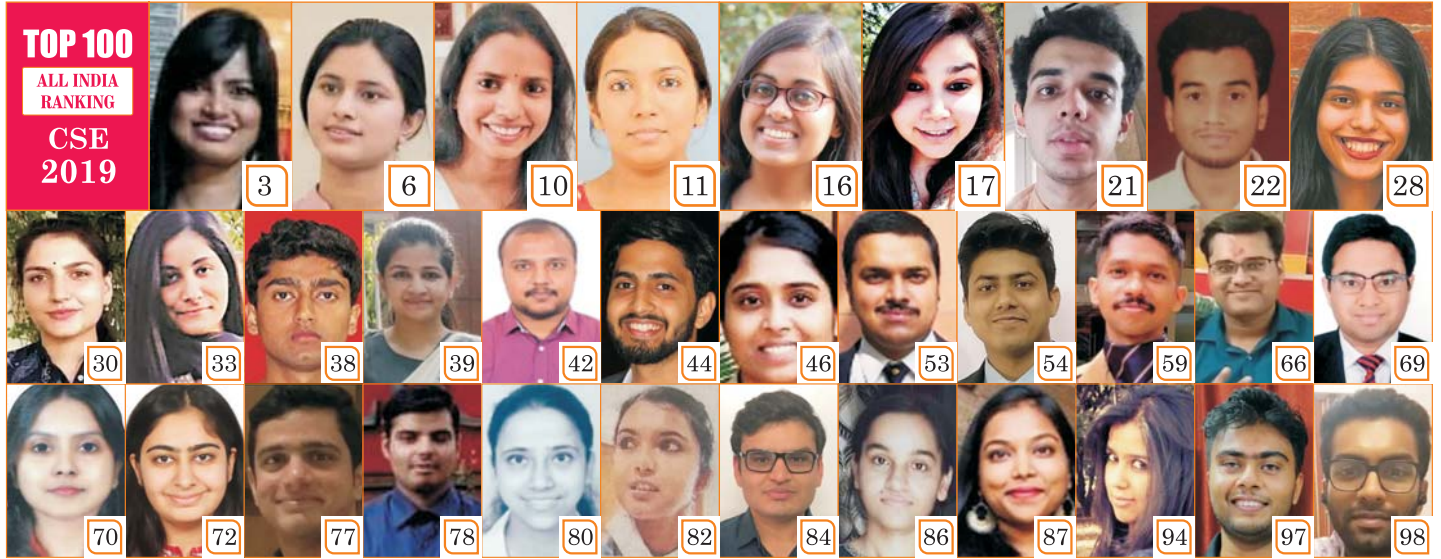


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