



Editorial

योगयुक्तो विशुद्धात्मा विजितात्मा जितेन्द्रियः।
सर्वभूतात्मभूतात्मा कुर्वन्नपि न लिप्यते।।5.7।।

“Those who control their senses and master themselves are steadfast in yoga. They relate to everyone as themselves” says the Bhagwad Gita (Ch5.7) echoing the Kathopanishad. This wisdom resonates down the centuries in ancient Tamil literature too.

இயம நியமமே எண்ணிலா ஆதனம்
நயமுறு பிராணாயா மம் பிரத்தி
யாகாரஞ் சயமிசு தாரணை
தியானஞ் சமாதி

அயமுறும் அட்டாங்க மாவது மாமே.

- திருமூலர் அருளிய திருமந்திரம் (552)

*Iyama niyamame ennilaa aadanam
nayamuru praanaayamam
prathiyagaaram chayamigu thaaranai
dhyaanam samaadhi
ayamurum attangamaavadhum aame.*

- Tirumandiram (552) - Thirumoolar

(Meaning – The 8 angas of yoga are external discipline, internal discipline. Asanas (physical poses), pranayama, pratyahara (withdrawal of senses), dharana (concentration), dhyana (meditative absorption) and samadhi (oneness).)

ஒருமையுள் ஆமைபோல் ஐந்தடக்கல் ஆற்றின்
எழுமையும் ஏமாப் புடைத்து.

- திருவள்ளுவர் அருளிய திருக்குறள் (126)

*Orumayul aamaipol aindadakkal aattrin
ezhumayum emaappudaithu.*

- Tirukkural (126) - Thiruvalluvar

(Meaning -The benefits of the control of the five senses extend beyond a single lifetime.)

Yoga and spirituality permeate our civilisation negating the vast distances of this sacred nation and keep us united. Despite the adaptations it has undergone worldwide, yoga remains a powerful means to wholesome wellbeing.

It's time for us Indians to value our heritage and reap benefits as our seers enunciated; and protect India's integrity overlooking insignificant differences among us.

Happy to share plenty of positive developments across the world, within India and with regard to Prajya too. Very soon Prajya will take its avatar in print and you can place your order for subscription.

Read, reflect and revert with your thoughts and feelings. We look forward to your support and suggestions.

Editorial Team

Dear Readers,

There have been requests from quite a few readers for hard copies of Prajya. We understand that quite a high percentage of our young readers keep revisiting some articles, and a handy print version within reach induces one to read more often, highlight things and make notes. This also partly contributes to students spending less screen time. The Prajya team is in advanced stages of preparations for bringing out a print version. However, there are few things that we want to be careful about: **a.** we don't want to print more than what is required and **b.** keep the cost of the print version (plus postage) within reasonable limits. A preprint survey would help us decide with respect to the numbers. **Please note that the access to free online e-version will continue.**

So, it will greatly help us if you could fill in the details in the link provided. Please note that we intend this to be, in the long run, a national magazine for school children. <https://zfrmz.in/Jmku7z6WZWDg1hqZjzcW>

In this issue



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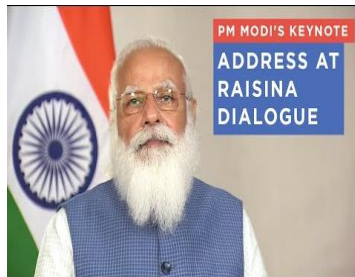
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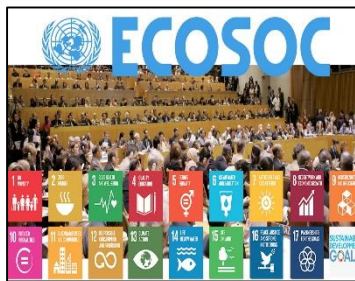
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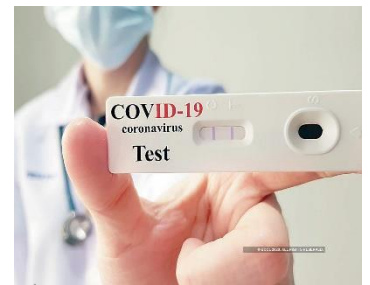
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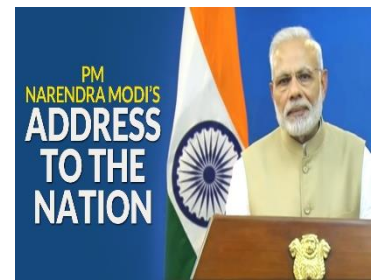
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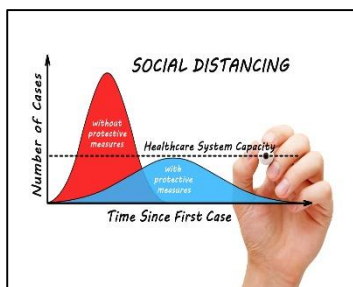
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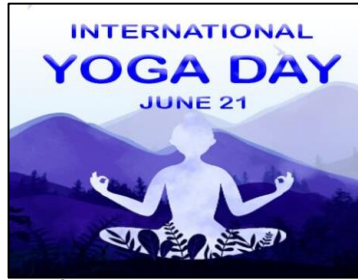
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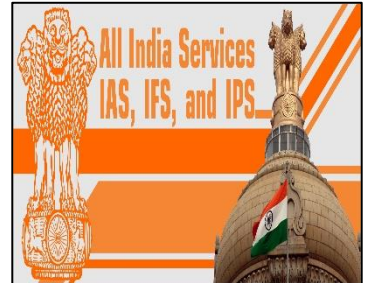
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DEHING PATKAI ASSAM'S 7TH NATIONAL PARK



STATE, CENTER & CIVIL SERVANTS

CURIOSITY corner



THE POWER OF COMPOUNDING



CONSTITUTIONAL LAW



**RISE AND SHINE,
ROTIFER!!!**



Know Your Legacy



HISTORICAL WONDERS OF INDIA



Know Your Nation



Padma Vibhushan

Padma Bhushan

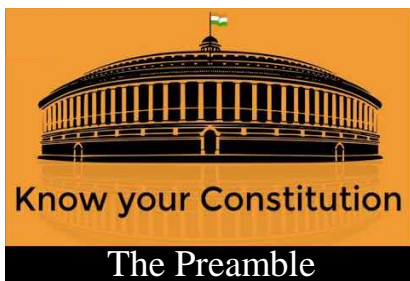
Padma Shri



Know Your Padma Awardees



**GEOGRAPHICAL WONDERS
OF INDIA**



The Central Government launched an ambitious programme to use ethanol blended transportation fuel in the ratio of 20:80, by the year 2025. This initiative was announced on 5th June 2021, the **World Environment Day**.

Nearly 115 years ago Henry Ford's first car ran on ethanol. Rudolph Diesel ran his engine on peanut oil. Both the inventors later discovered that a slightly refined "rock oil" was more powerful for their engines, thereby heralding the second interesting innings of **"The Hydrocarbon man."**

Is there a crying need for this impetus?

Of course, it's long overdue. India's vulnerability to external crude is serious. **We import 80% of our crude** requirements with outgo of precious foreign exchange to the tune of 100 billion dollars and more. We are susceptible to supply disruptions and wild price fluctuations.

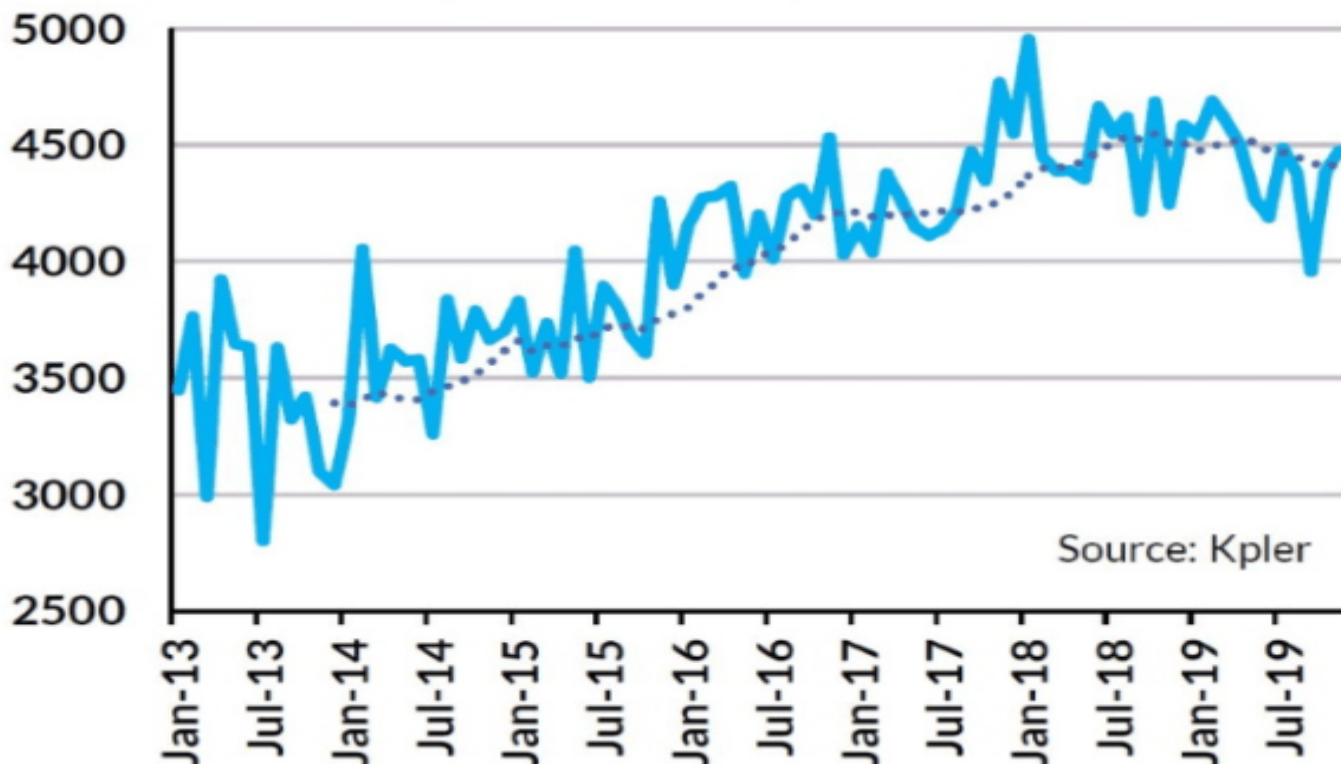


Important numbers and statistics

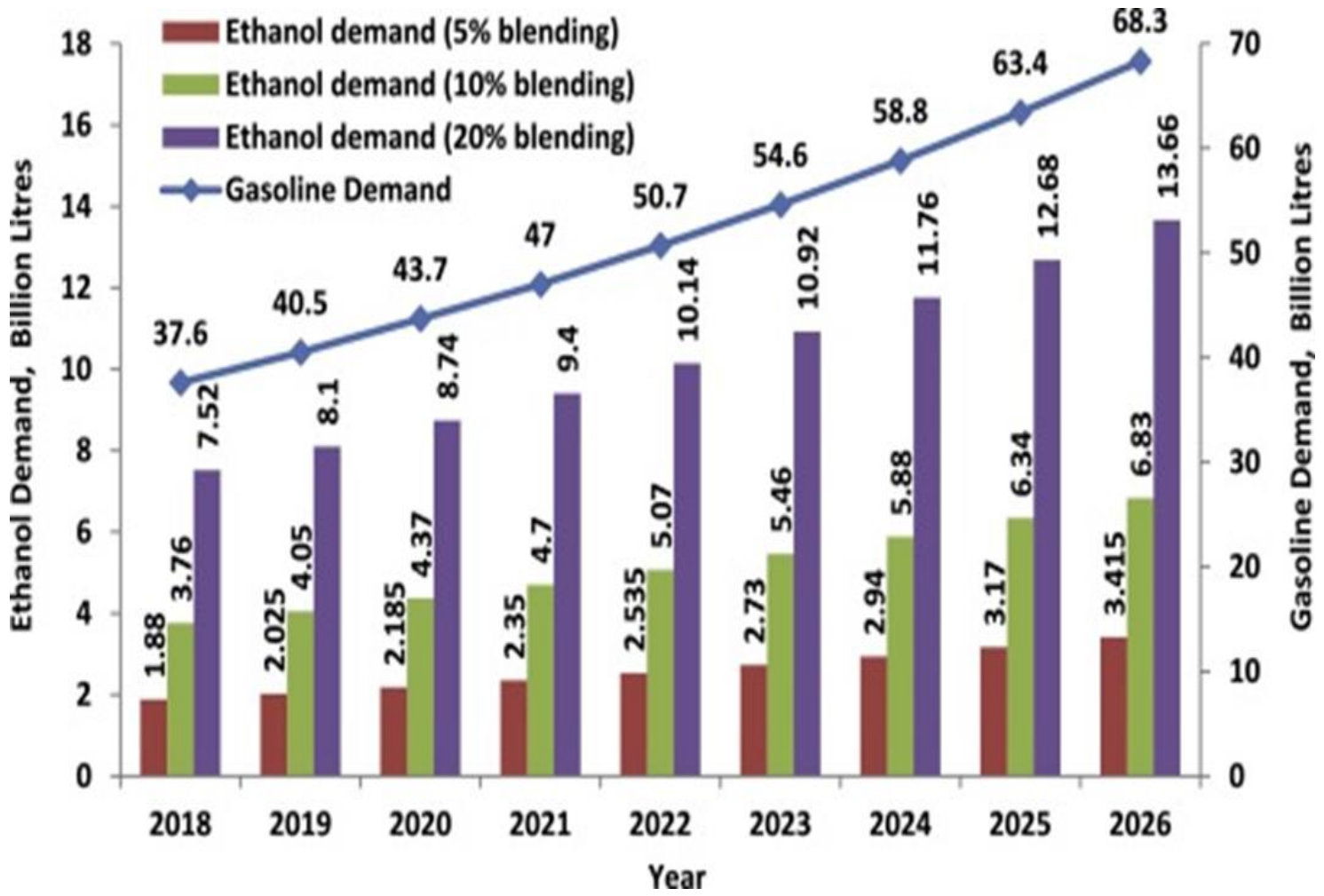
While the world consumes 100 billion barrels of crude a day, India consumes 5 million barrels of crude a day. **America and Brazil produce 85% of the world's ethanol.**

The Indian ethanol industry is primarily sugarcane based like in Brazil. India is poised to produce 7 billion litres of ethanol by 2023, with a projected demand of 10 billion litres.

Indian Crude Imports (000 b/d)



Source: Kpler



For reference Brazil has a very successful ethanol blended gasoline programme running from the year 1990.

As of 2007, till today **90% of all Brazilian cars run on blended fuels** of E10 to E30 Volkswagen Brazil started manufacturing Flexi cars from 2013.

A special software automatically adjusts the air to fuel ratio for any blend of fuel. Looking back, it was sugarcane that backed the programme than the engine.

India's ethanol blended gasoline programme is likely to set rolling by April 2023 with sugarcane as its raw feed.

While it is to be produced from cane sugar, ethanol can also be extracted from the stalk of the sugarcane plant called bagasse which is 20% ethanol.

The waste after ethanol extraction can be used to burn to generate heat and electricity.

Can ethanol be produced from other sources?

Yes, it is extracted from corn and grass in America. But vast differences exist in growing crops for ethanol as fuel - the right way and the wrong way. Sugarcane yields 600 to 800 gallons of ethanol per acre, corn 300 gallons. A special kind of grass called prairie grass yields 1500 gallons of ethanol, can be grown in marginal lands not suitable for food crops.

The cellulose material of this grass can be enzymatically converted to ethanol. Algae seems to be the most innovative way to extract ethanol. It can be grown in waste water and can churn up 5000 gallons of ethanol per acre, freeing the land for food crops.

What are the pitfalls?

Undoubtedly it is the balance between food and fuel. If farmers find it remunerative to grow ethanol crops, the food production will suffer.

With 50% of India's land at different stages of degradation, repeated cropping for ethanol can hasten soil degradation.

The demand for water, fertilizers, vagaries of nature and subsequent supply disruptions need to be taken into consideration.

What are the benefits?

Plenty. India can save on its outflow of precious foreign exchange; reduced dependence will usher in newer technologies, sequester carbon from atmosphere. The most important benefit is that it will pour more money into rural households.

Let's check out some technical facts. E10 and E20 blended fuels have been tested for four stroke engines without any modifications.

Their Lambda value (the power they pack) is higher than pure gasoline. The octane value for ethanol is 105 when compared to 84 for petrol. The use of ethanol as blended fuel can reduce the emissions of volatile organic compounds from 20 to 40%.

Does ethanol use augur well for India's international commitments?

Certainly. India is a signatory to the Paris Convention to reduce emissions and mitigate climate change, that is ratified by 195 countries.

Ethanol as a blended fuel mix is an important way forward to take the load of Indian planners who are at their wits' end when it comes to crude import. Transportation will see a lot of change in India - electric vehicles, improved public transportation, emphasis on dedicated freight corridor and use of water ways.

Certainly, blending fuels with ethanol **is** the way forward.

Do You Know?

Carbon dioxide is the most commonly produced greenhouse gas.

Carbon sequestration is the process of capturing and storing atmospheric **Carbon dioxide**.

Do You Know?

- **An octane rating /number**, is a standard measure of an engine or aviation gasoline capability against compression. The higher the octane number, the more compression the fuel can withstand before detonating.
- **E10** – A fuel mixture of 10% dry ethanol and 90% petrol. Likewise, **E20** – is a 20% + 80% mixture.
- The ideal (theoretical) **air-fuel ratio (AFR)**, for a complete combustion is called **stoichiometric** air-fuel ratio. For a gasoline (petrol) engine, the ideal AFR is around 14.7:1. This means that, in order to burn completely 1 kg of fuel, we need 14.7 kg of air. For example, in order to burn completely 1 kg of ethanol, we need 9 kg of air and to burn 1 kg of diesel fuel, we need 14.5 kg of air.
- In reality, internal combustion engines do not work exactly with ideal AFR, but with values close to it. **Therefore, we'll have an ideal and an actual AFR.** For example, the ideal AFR for a gasoline (petrol) engine is 14.7:1. If the actual/real AFR is 13.5, the equivalence factor **lambda** will be:

$$\lambda = 13.5 / 14.7 = 0.92$$

- The best combustion efficiency is obtained at $\lambda = 2.00$ for diesel and $\lambda = 1.12$ for spark ignition (petrol) engines.

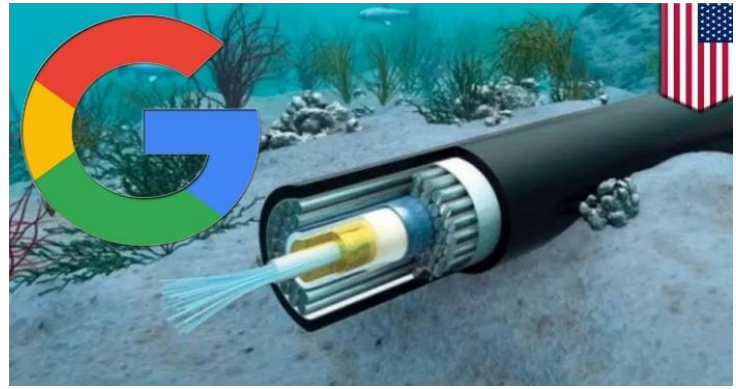


Zippering Through the Ocean

Google will be building an undersea cable connecting the US, Uruguay, Brazil and Argentina to bolster the capacity of internet connection.

Named **Firmina** after a Brazilian author Maria Firmina dos Reis, this cable will be the longest in the world.

Objective: Improving access to Google services in South America.



Key features

- With 12 fibre pairs, the cable will carry traffic quickly and securely between South and North America, giving its users low latency(delay), fast access to Google products such as Gmail, YouTube, Search, as well as, Google Cloud Services.
- Capable of running entirely from a single power source at one end if its other power source(s) become temporarily unavailable.

A 456-foot ship named **Durable** will deliver the cable to sea after it is assembled with specialized machinery to maintain tension in the wire and encase it in protective skin.

Though many of us experience the internet through Wi-Fi, those systems eventually link up with physical cables carrying the information swiftly across oceans.

How the Internet travels across oceans

The internet consists of tiny bits of code that move around the world, traveling along wires as thin as a strand of hair strung across the ocean floor. The data darts from New York to Sydney, from Hong Kong to London, in the **time it takes you to read this word.**

The first trans-Atlantic cable (1858) connected the US and Britain. It took **16 hours to transmit** Queen Victoria's message to President James Buchanan!!



India's GDP Estimated to Grow at 8.3%

Shri Krishnakumar C S

Gross Domestic Product is the sum of values of all final goods and services produced within a country in a year. It is the **aggregate of the money value of goods produced** by primary, secondary, and tertiary sectors. An increase in GDP is the result of increased production in these sectors.

Worldwide economic slowdown caused by the pandemic affected Indian economy also adversely. GDP growth rate fell to 4% in 2019 – 2020.

Special economic packages and several other fiscal and monetary measures adopted by the governments have helped our economy to recover significantly.

World Bank in its report titled '**Global Economic Prospects**' released in June 2021 projected that the Indian economy would grow at the rate of 8.3% in 2022. It would be a remarkable achievement considering the fact that India was hit badly by the second wave of the pandemic.



Higher spending on infrastructure, rural development and health, and a stronger-than-expected recovery in services and manufacturing would make India progress said the report. So, let us hope that our nation will come out of the present situation and join the group of developed countries in the coming years.

Do You Know?

World Bank founded in 1994 consists of **International Bank for Reconstruction and Development (IBRD)** and **International Development Association (IDA)**. With headquarters in Washington DC, it provides loans and grants to low- and middle-income countries for development projects.

GDP projections by World Bank

Countries	2021	2022
 India	8.3%	7.5%
 USA	6.8%	4.2%
 China	8.5%	5.4%
 Euro Area	4.2%	4.4%
 Japan	2.9%	2.6%
 Bangladesh	3.6%	5.1%
 Indonesia	4.4%	5.0%
 Brazil	4.5%	2.5%
 Mexico	5.0%	3.0%



G-7 Summit 2021

The 47th G7 Summit was held in June 2021 in Cornwall, United Kingdom. The leaders of the seven member states plus representatives of the European Union (EU) participated.

Boris Johnson, Prime Minister of the United Kingdom, served as the chairperson for this year's summit.

He also invited important global leaders from Australia, India, South Africa and the Republic of Korea.

The UN Secretary-General, António Guterres, was also present. While all the leaders were present in-person, Prime Minister Narendra Modi joined the meeting virtually due to the ongoing pandemic.

What is the G7?

G7 or the Group of Seven is an inter-governmental political forum consisting of the **United Kingdom, the United States of America, Canada, France, Germany, Italy and Japan**. Representatives of the EU have been permanently welcome participants in all the meetings and decision making since 1981.

The first G6 summit was held in November 1975 with all the participants, except for Canada. Canada joined the forum in 1976 and made it G7. It was G8 between the years 1997 and 2014 due to the inclusion of Russia.

But Russia was removed from the forum due to its invasion of the Crimean Peninsula.



Carbis Bay G7 Summit

The venue was Carbis Bay, a seaside resort and village. The **motto** for this year's summit was **"Building Back Better"**. The leaders acknowledged the ongoing impacts of COVID-19, remembered the lives lost due to coronavirus and paid tributes to the people who are still working to overcome the virus.

A summary of the shared G7 agenda:

- The immediate focus of the countries is on beating the COVID-19 and **ending the pandemic in 2022**. An intensified international effort will be taken to increase vaccine production, distribution and vaccination. The G7 nations have **pledged one billion vaccines** to other countries. At least **60% of the global population needs to be vaccinated** to create herd immunity and slow down further mutation of coronavirus.
- British PM Boris Johnson proposed a **five-point plan to prevent future pandemics**, which includes a worldwide network of zoonotic research hubs, developing global manufacturing capacity for treatments and vaccines, the design of a global early warning system, the agreement of global protocols for a future health emergency and the reduction of trade barriers. The leaders also agreed to support science in its mission to shorten the cycle for the development of safe and effective vaccines, treatments and tests from 300 to 100 days.

→ **Economic recovery** from the pandemic is proposed using the \$12 trillion support to retain jobs, support incomes and keep businesses afloat. The focus will also shift from crisis response to promoting future growth in terms of **creating new job opportunities**, infrastructure development and adherence to inclusivity. No person shall be left behind because of their age, ethnicity, disability, sexuality or gender.

→ A **reformed trading system** will help the G7 achieve freer and fairer global trade, and a tax system that is fair across the world. The future global economy will ensure the equality, prosperity, and well-being of all people from cyberspace to outer space. Digitalisation, technological growth and green transition will be taken into consideration while reforming the trading systems.

→ Climate change and loss of biodiversity has made green transition an essential part of sustainable growth. The transition will attempt to cut emissions, halt and reverse biodiversity loss, create eco-friendly jobs and seek to limit global temperature rise to 1.5°C. The countries have also **committed to achieve net zero greenhouse gas emissions** by 2050 at the latest.

→ Advancement of **gender equality** is proposed through educating girls, empowering women, and ending violence against women and girls. Gender equality also plays a tangible role in eradicating racism, and violence and discrimination against LGBTQI+ population.

→ The G7 will **strengthen their bond with partner countries** (Australia, India, South Africa, and the Republic of Korea) by increasing cooperation on supporting democracy, strengthening media freedom, promoting human rights, and making investments for clean and green growth.

The countries will also work with the G20 partners to secure a cleaner, greener, freer, fairer and safer future for the people and the planet.

India in the G7 Summit

PM Modi participated in two sessions named **‘Building Back Together—Open Societies and Economies’** and **‘Building Back Greener: Climate and Nature’**, on day two of the summit. He noted that democracy and freedom were a part of India’s civilization ethos. He shared the concern of several leaders that open societies are vulnerable to disinformation and cyber-attacks. He also stressed that cyberspace should remain an avenue for advancing democratic values and not for subverting it.

He noted that India is the only G20 country that is on track to meet the Paris Agreement. He further spoke about the **Indian Railways approach of achieving Net Zero Emissions by 2030**. He ended his speech with a message of ‘global solidarity and unity, especially between open and democratic societies and economies, in tackling the global challenges of health, climate change.’

Do You Know?

The Paris Agreement

To tackle climate change and its negative impacts, 196 countries adopted the Paris Agreement which came into force on 4th November 2016.

Key elements of the commitment:

- Limit temperature rise to 1.5°C
- Review countries’ commitments to cutting emissions every five years.
- Provide climate finance to developing countries.

Do You Know?

The G7 was formed on 25th March 1973 as a result of the huge economic problems facing the world in the 1970s. International challenges at that time included the long-standing conflict between Iran and Iraq and the Soviet occupation of Afghanistan.





Prime Minister Shri Narendra Modi delivered a keynote address at the UN High-level dialogue held virtually on 14th June 2021.

He spoke about how India was on track to have “zero land degradation” by the year 2030.

The conference was organized in accordance with the UN General Assembly Resolution 75/218, to combat **desertification, land degradation and drought**, and assess the progress made so far and also to map the way forward in the UN’s Decade on Ecosystem Restoration.

UN Resolutions

Resolutions are formal expressions of the opinion or will of various UN organs and are issued as individual documents. These are used to create objectives that the UN affiliated countries will have to work towards meeting.

The 75/218 looks as follows.

A/RES/75/218	C.2	19 (e)	A/75/PV.48 21 December 2020 GA/12306 without a vote	A/75/457/Add.5	Implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa
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Land degradation is the process by which the value of land is affected by human intervention which makes the land unusable. It is classified as any undesirable change causing a reduction in the yield of the land.

Certain natural factors such as lack of rainfall and topography may cause land degradation.

However, **land pollution and consequently, land degradation are caused by improper irrigation, deforestation, commercial development, dumping of industrial waste and other such untenable practices.**

Serving in his capacity as President of the 14th session of the Conference of Parties of United Nations Convention to Combat Desertification (UNCCD) the Prime Minister reaffirmed the national commitment to achieve ‘land degradation neutrality’ while working towards **restoring more than 26 million hectares of degraded land.**

PM Modi said in his address, “In India, over the **last 10 years around 3 million hectares of forest cover has been added.**”

This has enhanced the combined forest cover to almost one-fourth of the country’s total area.”

UN Deputy Secretary General, Amina J Mohammed echoed the sentiments presented by PM Modi and laid out the following priorities for the coming decade:

1. Raising ambition on land restoration
2. Aiming to end illegal deforestation
3. Investing in land-based solutions to sustain Covid-19 recovery
4. Tackling the climate crisis

PM concluded that restoring degraded land is the start to a virtuous cycle of good soil health, increase in land productivity, food security and improved livelihoods.


Respecting and caring for Mother Earth and ensuring a prosperous future for the generations to come is mankind's collective responsibility.

As citizens we can do our part by following the principles of Respecting and caring for Mother Earth.

Ensuring a prosperous future for the generations to come is mankind's collective responsibility.

As citizens we can do our part by following the principles of reducing, reusing, recycling, planting and caring for trees and trying to avoid polluting the land in our communities.

Do You Know?

Position	Held by	Country
President of the General Assembly	Volkan Bozkır	Turkey
Deputy-Secretary General of the UN	Amina J. Mohammed	Nigeria
United Nations Economic and Social Council	Oh Joon	South Korea
President of the UNCCD	Narendra Modi	India
Executive-Secretary of the UNCCD	Ibrahim Thiaw	Mauritania 

India Re-enters the UN Security Council

Smt Vaishnavi V

The two World Wars shook the conscience of the people and highlighted the need for peace among nations.

This gave birth to the **United Nations** (1945). Its activities include **maintaining international peace and security, protecting human rights, delivering humanitarian aid, promoting sustainable development and upholding international law.**

The United Nations Security Council (UNSC) is one of the five principal organs of the UN, charged with the maintenance of international peace and security as well as accepting new members to the UN and approving any changes to its charter.

It takes the lead in determining the existence of a threat to peace and can also deploy UN peacekeeping operations.

Members

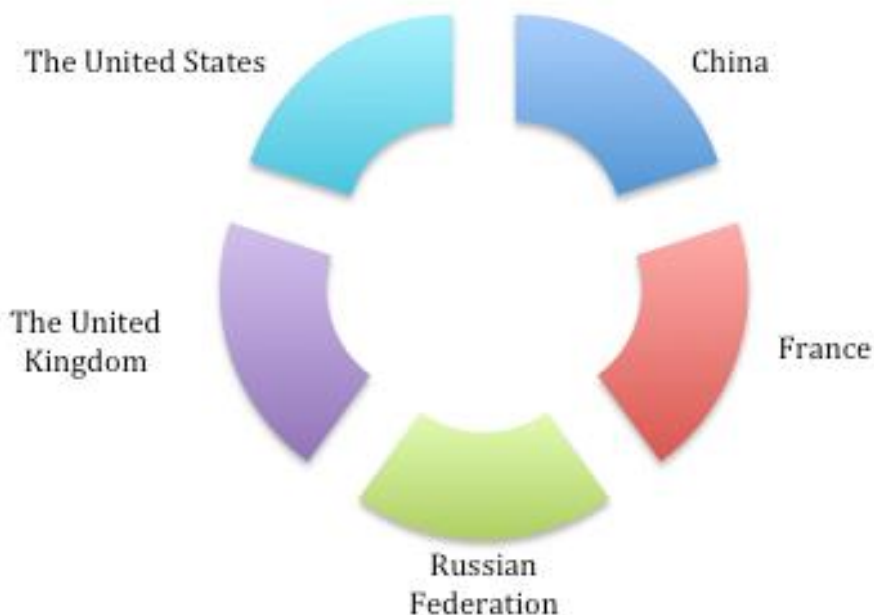
- ➔ Totally 15 - **5 permanent and 10 non-permanent members** who are elected by the United Nations General Assembly (UNGA).
- ➔ The non-permanent members' term is two years.
- ➔ Five members are replaced every year.
- ➔ Members are selected from all the regions of the world.
- ➔ There is an informal understanding between Asia and Africa to reserve one seat for an Arab country.
- ➔ They take turns every two years to put up an Arab candidate.



Elections for terms beginning in

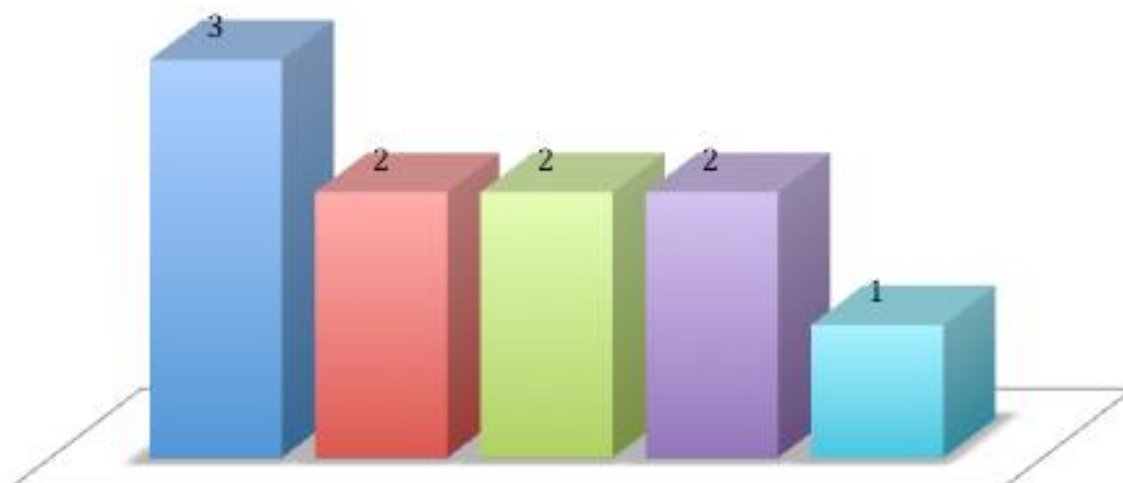
Even-numbered years		Odd-numbered years	
Group and No. of Member Countries		Group and No. of Member Countries	
Africa	2	Western Europe	2
Asia	1	Africa	1
Eastern Europe	1	Asia	1
Latin America and the Caribbean	1	Latin America and the Caribbean	1

Permanent Members



Non Permanent Members

■ Africa
 ■ Asia
 ■ Western Europe
 ■ Latin America and the Caribbean
 ■ Eastern Europe





India in the UNSC elections

In June 2020, India was elected to the UNSC as a non-permanent member, winning **184 out of the 193 votes** at the UNGA.

This is India's **8th stint**.

Unlike Africa, which has formalized a system of rotation of its 3 seats, the Asia Pacific grouping has often seen contests for seats.

For e.g. in 2018, there was a contest between Maldives and Indonesia.

This term, India was the only candidate for the vacancy from the Asia Pacific.

The **55 members of the Asia Pacific group**,

including Pakistan and China last year, **endorsed India's candidature for the seat unanimously**.

For the *Western Europe and other countries* category - Canada, Ireland and Norway were vying for 2 seats.

Kenya and Djibouti for 1 seat from the African group. And Mexico (like India) was the only candidate from the Latin America and the Caribbean group.

Even a "clean slate" candidate country endorsed by its group needs the votes of two-thirds of the members present and voting at the General Assembly session – a minimum of 129 votes, if all 193 participate.

India and permanent membership in UNSC

India has not been successful so far in becoming a permanent member.

India's claims for the prime position:

1. The fastest-growing economy in the world.
2. Is a Nuclear Weapons State.
3. The second largest in terms of population and the largest liberal democracy.
4. Ranks high in purchasing power parity and is a huge contributor to UN Peacekeeping Missions.

To achieve this, India has to garner sufficient votes, maintain cordial diplomatic relationships and ensure robust economic growth.

INDIA'S 5S VISION FOR FOREIGN POLICY

SAMMAN	- RESPECT
SAMVAD	- DIALOGUE
SAHYOG	- COOPERATION
SHANTI	- PEACE
SAMRIDDHI	- PROSPERITY

Do You Know?

The 5 permanent members are given a **veto power**, which means if any one of these countries veto a resolution it can't be passed even if it has the votes of **all** the non-permanent members.



Antonio Guterres as the UN Secretary General for the 2nd Term

Pranavi Karthik Kumaran | Student (VIII)

The UN Security Council unanimously reelected Antonio Guterres as the Secretary General of the United Nations. His term will be between 1st January 2022 and 31st December 2026. He has called for a new era of '**solidarity and equality**.'

Personal Information

Born: 30.4.1949 Lisbon, Portugal

Nationality: Portuguese

Full name: Antonio Manuel de Oliveira Guterres

Education: Studied physics and engineering at the Universidade de Lisboa's elite Instituto Superior Técnico, earning a degree in 1971.

Political career

1974: Joined the Socialist Party.

1976: Elected to the Portuguese Parliament; served on a variety of committees.

1981-1983: Member of the Parliamentary Assembly of the Council of Europe.

1992: Elected secretary-general of the Socialist Party.

1995: Elected Prime Minister of Portugal.

During his term as a Prime Minister, Guterres



→ Oversaw Portugal's transition to the Euro as its official currency.

→ Presided over the transfer of Macau (a Portuguese territory) to China.

→ Played a key role in the resolution of the crisis in East Timor (occupied by Indonesia since 1975) and advocated its independence.

2005: Elected as the High Commissioner for Refugees.

2016: Elected as the UN Secretary General (Jan 2017 -Dec 2021).





India has been elected as a member of the **United Nations Economic and Social Council (ECOSOC)**, one of UN's six main organs, for a three-year term (**2022-24**) along with **17 other countries**.

The 18 countries:

- Cote d'Ivoire, Eswatini, Mauritius, Tanzania, Tunisia from **Africa**.
- Afghanistan, India, Kazakhstan, Oman from **Asia-Pacific**.
- Croatia, the Czech Republic from **Eastern Europe**.
- Belize, Chile, Peru from **Latin America and Caribbean states**.
- Belgium, Italy from **Western Europe**; Canada and the United States.

ECOSOC in a nutshell

- Principal body for coordination, policy review, policy dialogue.
- Promoting sustainable development (Economic, Social and Environment).
- Implementation of internationally agreed development goals.
- Facilitating co-ordination between the various specialized agencies of the UN such as World Bank, WHO etc.
- Has 8 Functional Commissions, 5 Regional Commissions and 3 Standing Committees.



President: His Excellency Munir Akram

India's Ambassador to UN ECOSOC: Shri TS Tirumurti

Established: 26th June 1945

Headquarters: New York & Geneva

Members: 54



ICMR Approves Self-Use Rapid Antigen Test Kit Smt Shubha T R

ICMR has recently validated and approved three COVID-19 Home Test kits. These kits are recommended for **symptomatic individuals/ immediate contacts** of laboratory confirmed COVID positive patients.

- ➔ **CoviSelf** developed by Mylab Discovery Solutions (Pune)
- ➔ **PanBio Covid-19 Antigen Test Device** by Abbott Rapid Diagnostics Division (Chicago)
- ➔ **COVIFIND** by Meril Diagnostics (Vapi)

Benefits

- ➔ Helps in meeting the demand for increased and frequent COVID-19 testing.
- ➔ Convenient; helps in avoiding rush at testing centres and hospitals.
- ➔ Helps in identifying positive patients within minutes and curtailing the spread of infection.
- ➔ Mobile app helps the government to keep track of the positivity rate and maintain census.
- ➔ Easily available in Pharmacies, e-Commerce platforms at affordable price.



What medical experts say

- ➔ RAT (Rapid Antigen Test) kits **are less accurate than those of RTPCR.**
- ➔ Proper sampling and adhering to the instructions for testing are important to get accurate results.
- ➔ **Indiscriminate testing should be avoided.**

Types of Covid-19 tests

	RT-PCR (Reverse Transcription Polymerase Chain Reaction)	RTK-Ag Test (Rapid Test Kit Antigen)	Antibody Test
What it is	Diagnostic test (molecular) to show if a person has an active infection	Diagnostic test (antigen) to show if a person has an active infection	Test to show if a person had an infection in the past
What it detects	The virus's genetic material	Specific proteins from the virus	Antibodies in the person's immune system
How the sample is taken	Nasal or throat swab	Nasal or throat swab	Blood test (finger prick or blood draw)
How long it takes to get results	Same day or up to a week	15 to 30 minutes	Same day, or a few days
Accuracy	Typically high accuracy rates	Usually highly accurate, but false negatives can occur. Negative results need to be confirmed with a molecular test	Sometimes a second test is needed for accurate results
Usefulness in diagnosing Covid-19 patients	Considered the 'gold standard' in diagnosing Covid-19 virus due to high sensitivity (accuracy) rates	Useful for detecting Covid-19 outbreaks quickly and in large quantities	Able to see if someone has past infection, but it is not suitable to detect current active Covid-19 infection

TESTING GETS EASIER



- CoviSelf, a self-use Rapid antigen test, can give results in 15 minutes
- To be available at nearby chemist without a prescription
- AI-based CoviSelf mobile app will show results when picture uploaded
- CoviSelf app connected to ICMR-Covid-19 testing portal
- Company aims to build traceability of the kits pincode-wise to the end user
- Mylab aims makes 7-8 million CoviSelf kits a week now; plans to ramp up 1.5 times

ICMR Advisory on RATs -

https://www.icmr.gov.in/pdf/covid/kits/Advisory_Home_Test_kit_19052021_v1.pdf



Integration Of Jammu and Kashmir

Shri Bharath

Dr. Shyamaprasad Mukherjee was a nationalist of a rare kind. He was born in 1901 to Shri. Ashutosh Mukerjee and Smt. Jogamaya Devi in Kolkata. He died under mysterious circumstances on **23rd of June, 1953**.

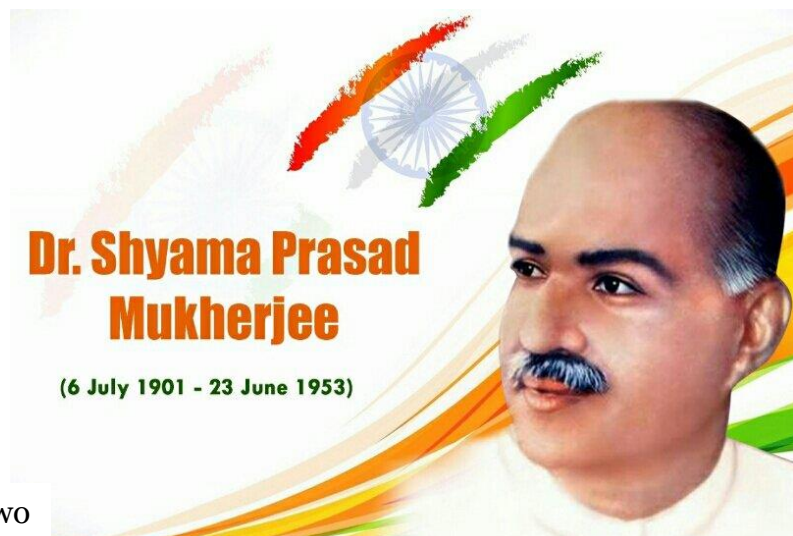
How and why is it important?

To answer this question, we need to know a bit about the history of our country in the years immediately preceding Independence.

Prior to independence, undivided India had two segments - British India and the Indian states. British India was directly under the British crown.

The 565 Indian states or princely states were under the British with the internal affairs under the respective kings.

In June 1946, the British government made a final announcement that they were leaving India in the state in which it stood.



This meant that the British India would be handed over to the government to be installed and the Indian states that fell outside the British domain would be handed over to the respective kings.

The states could choose to either accede with India or Pakistan.

The important point to be noted here is that there was no third option of being independent.

This clearly was a recipe for disaster. The task of integrating 565 individual states ruled by different kings was next to impossible.

This betrayed the ulterior motives of the British too.

But the sagacity and determination of one man, ably supported by his secretary, accomplished this herculean task of ushering in a United Bharath.

That man was **Sardar Vallabhbhai Patel** and his secretary was V. P. Menon. 552 states acceded to India and 13 with Pakistan. Out of those that acceded to India, with three there were serious problems - **Jammu & Kashmir**, Hyderabad and Junagarh. Sardar Patel completed the task with Hyderabad and Junagarh.

Problems continued in the state of J&K. There the situation was also complicated. It had a *de jure* ruler in Maharaja Hari Singh and a *de facto* ruler in Sheikh Abdullah. Hari Singh was indecisive and was negotiating with both India and Pakistan. Knowing the power equation in the state and the nature of the king, Pakistan sensed an opportunity to annex the state. Under the pretext of a tribal uprising, it invaded J&K on 22nd October 1947.

Subsequent to this Hari Singh sent an S.O.S to the government seeking help as the people were being subjected to atrocities by the Pakistani invaders and in return, he shall accede to India on the same terms as the other princely states did. Sheikh Abdullah was also aligned to this approach and India began '**Operation Rescue Kashmir**' on 25th October 1947.

Subsequently, when the Constituent Assembly adopted the Indian Constitution, Article 370 which provided special status to Kashmir was enacted.

This was not necessary at all given the circumstances under which J&K acceded to India. Even now it is not clear as to how this article found its way into the Constitution.

Article 1 of our Constitution states that India shall be a Union of States as listed in the First Schedule and J&K is listed as one of the states in the First Schedule.

Except this article none of the other provisions, including the fundamental rights, of the Constitution are applicable to J&K. Any other provision can be applicable only if the Constituent Assembly or the government of J&K gives its assent. This is the position as per the Constitution adopted by us in 1950. The only saving grace was that this Article was envisaged to be only '**temporary and transitional.**'

In 1951, a Constituent Assembly for J&K was elected and it framed a constitution, as per which the state had a separate Prime Minister (*Wazeer e azam*) and a separate President (*Sadr e Riyasat*) and a separate flag. Nobody could enter the state without a proper permit.

Let us now explore **Dr. Shyamaprasad Mukherjee's relevance to J&K and national integration.** His life was full of action and achievements. After his graduation and post-graduation in Kolkata (then Calcutta) he went on to become a Barrister. At the age of 33, he became the Vice Chancellor of the University of Calcutta in 1934. As the youngest VC, he made sweeping reforms in the education system and introduced many new courses in the university.

Three things that one can witness in all his actions are **uncompromising nationalism, fiercely independent nature and fighting spirit.**

In 1940, he was instrumental in installing a coalition government after ousting the Muslim League, giving Bengal a spell of a Nationalist Government. He was the finance minister. He resigned in 1942 in protest against the treatment meted out to the people of Midnapore for participating in the Quit India movement.

His work during the Bengal famine in 1943 demonstrated that he was not only a leader but also a humane leader.

Two events that deeply impacted him and shaped his future politics were the aftermath of **Direct-Action Day protest** of the Muslim League and the **Noakhali riots** in 1946 in which thousands were killed. There was mass destruction, arson, looting and crime against women.

He was elected to the Constituent Assembly the same year and he forcefully argued against the partition of India before the Cabinet Mission. He could not succeed as the Congress had virtually accepted partition by then.

Thereafter he spent all his efforts in preventing Punjab and Bengal going to Pakistan as part of the Partition Agreement.

It was his efforts that helped retain the Hindu majority areas of Punjab and Bengal in India. But for him India would have lost Calcutta along with Lahore to Pakistan.

In 1947, he joined the National Government as a minister on Gandhiji's invitation. Dr. Mukherjee and Dr. Ambedkar were the two most prominent non-Congress members of the cabinet.

He was given the Industry and Supplies portfolio and the **credit of India's First Industrial policy goes to him**. It is quite another matter that many of us did not get to learn this from our prescribed school history text books.

He resigned from the cabinet protesting against the Nehru-Liaquat Ali pact, feeling it was a betrayal of the interests of those who fled East Pakistan and took refuge in India. Though the pact had good intentions at least from Nehru's side, Dr Mukherjee felt Pak will let Hindus down. Looking back, his apprehensions were proved right.

He formed a political party by name Bharathiya Jana Sangh (BJS) in 1951. This was the forerunner of the present-day BJP. He was elected to the parliament in the 1952 general elections and sat in the opposition benches.

The BJS had only three MPs in the Lok Sabha. But he was recognised as the voice of the opposition.

He was called the '**Lion of Parliament**'. During a debate on J&K, he forcefully put forth his views against Article 370. He considered the J&K special status to be divisive. It was his conviction that in one nation there cannot be two constitutions, two Prime Ministers and two emblems.

In 1952 in a rally in Jammu he thundered "**I will get you the Indian Constitution or lay my life for it.**"

In 1953, after all his attempts to convince the government to do a rethink on J&K failed, he offered support to the Satyagraha of the J&K Praja Parishad for the full integration of J&K with India. He entered Jammu without a permit.

He was arrested for defying the permit system and on the 23rd June, he died in the jail under mysterious circumstances. Vociferous demands for a probe into his death were not accepted by the then government.

But the massive reactions that followed his death forced the government to abolish the permit system- a first step towards full integration of J&K with India.

The final step of abolition of Article 370 was done on the 5th August 2019 – 66 long years after his sacrifice.

As a tribute to Shyama Prasad Mukherjee, let us all rededicate ourselves to the unity and integrity of this nation and fight the divisive forces with all our might.

Do You Know?

The Nehru-Liaquat Pact (Delhi Pact) 1950 was a bilateral treaty between India and Pakistan in which refugees were allowed to return to dispose of their property, abducted women and looted property were to be returned, forced conversions were unrecognized and minority rights were confirmed.





On the intervening night of June 15-16, 2020, twenty Indian soldiers made the supreme sacrifice for their motherland during a violent clash between the Indian and Chinese armies at Galwan Valley situated in eastern Ladakh.

Earlier that night, the Chinese side had unilaterally attempted to change the status quo of the Line of Actual Control (LAC). The Chinese soldiers had used stones and nail studded rods and clubs during the ambush to attack the Indian Army. However, the Indian Army fought valiantly with the Chinese army for hours in an unarmed combat and inflicted a high death toll on the Chinese People's Liberation Army. The casualties on the Chinese side based on Indian intercepts were placed at forty-three.

It may be noted that soon after the event there was no formal announcement by China of the death of its soldiers. There were also no formal reports of their burial or the participation of the families in the funeral. After eight months, China officially acknowledged in February 2021 that four Chinese soldiers were killed and one was injured in the clashes.

On the other hand, India paid a grand tribute to the twenty soldiers who had laid down their lives. Their names have been inscribed at the National War Memorial in Delhi.

Indian Army has also constructed a memorial commemorating the sacrifices of the soldiers. It has come up at 'KM-120', a point near the confluence of the Galwan and Shyok rivers in honour of the heroes.

Following the Galwan clash, tension between India and China has been simmering. Both sides have resorted to heavy deployment of troops in the region while simultaneously engaging in talks for de-escalation.

As a fallout of the Galwan Valley clash, India had banned several Chinese apps like TikTok, Helo, WeChat, Cam Scanner, ShareIt, Clash of Kings, PUB-G in order to protect its digital sovereignty. These Chinese apps with millions of users in India were minting money at the cost of data of Indian citizens.

As a result of this strategic move, many desi apps like Koo, Josh, Kaagaz, ShareChat have started gaining prominence in the country, thus boosting Atmanirbhar movement.

India has also been moving steadfast with respect to development of border infrastructure for quick movement of troops. The Indian government has given an in-principle approval to construct a strategic tunnel below the Brahmaputra River in Assam.

This tunnel will connect Gohpur and Numaligarha and enable rapid movement of military transport and supplies.

India has plans to build at least 10 tunnels running up to 100 km in Ladakh and Kashmir that will facilitate the movement of the army and civilians throughout the year across mountain passes to difficult locations.

The much-needed Atal Tunnel built at the altitude of 10,000 feet in Rohtang has now significantly cut travel time between Manali in Himachal Pradesh and Leh, Ladakh.

What is LAC?

The LAC is the notional line demarcating India and Tibetan Autonomous Region, claimed by China.



Colonel Santhosh Babu

Colonel Bikumalla Santosh Babu, the Commanding Officer of 16 Bihar Regiment deployed in Galwan Valley (Eastern Ladakh) during **Operation Snow Leopard**, was tasked to establish an observation post to watch the movement of hostile forces.

He organised and briefed his troops about the situation with a sound plan and executed it successfully. While holding on to his position, his column faced stiff resistance from the Chinese who attacked using lethal and sharp weapons in addition to heavy stone pelting from adjoining heights.

The martyred Colonel was posthumously (after his death) awarded the Maha Vir Chakra, the second highest wartime gallantry award.



PM'S Address to the Nation - Highlights

Shri Pratik Kanodia

"Back-channels are those intermediaries who carry a viewpoint to the top. Modi was known to have an aversion for back-channels"—writes Shankar Aiyar in his book Aadhaar: A Biometric History of India's 12-Digit Revolution.

True to these words, PM Modi's preference for direct communication has reflected well in his actions.

In his most recent direct address to the nation on 7th June, the Prime Minister covered a sweeping range of issues; while most of his speech was objective, political undertones formed an important part of it, giving meaning to the larger picture he was attempting to draw.

PRIME MINISTER
NARENDRA MODI's
address to
the nation

05:00 PM 07 June 2021

LIVE ON [f /PIBINDIA](#) [@PIB_INDIA](#) [/PIBINDIA](#)

India fought united on many fronts

Acknowledging the scale of the pandemic, PM Modi highlighted that the nation had united as an army to fight the virus.

Setting up new hospitals overnight, boosting the ICU bed count, kick-starting large scale domestic production of ventilators, leveraging and building a massive network of testing labs—a completely new health infrastructure was created in the last 1.25 years alone, he said.

Countering critics, PM called to attention that the demand for medical oxygen had risen unimaginably during the second wave, unprecedented in India's medical history. *"To fulfil the demand, the government got on a war footing."*

All available resources were employed - oxygen rails, planes from the Indian Air Force, the Indian Navy, and in very little time, liquid oxygen production was increased tenfold. Any oxygen procurable from anywhere was brought in to ease the situation at home.

Mission Indradhanush

The PM emphasised the role of vaccination in beating the virus. He underscored the importance of Mission Indradhanush, launched in 2014 with the aim of inoculating all children, in boosting India's vaccine manufacturing infrastructure.

In 2014, India's "vaccination coverage was only 60% (as per data, only 65% of children were fully immunised in the first year of their life until then). *"At this pace, it would have taken forty years to reach complete coverage"*, the PM quipped.

Under Mission Indradhanush, **"in just 5-6 years the vaccination coverage was taken to 90%."** PM Modi pointed out that the country was struck by coronavirus while it was moving swiftly towards achieving 100% vaccine coverage.

"The entire world was anxious about how India, a country with such a large population, would defend herself."

Belief in scientists

"Within one year, India launched two made-in-India vaccines...our scientists have shown that India is not behind the various developed nations of the world," he said.

Quoting from the scriptures, PM spoke of ***vishwaasena siddhi***, meaning ***"we will be successful when we trust ourselves."*** India trusted in the ability of her scientists to produce vaccines; thus, even as the research was ongoing, logistical preparations for distributing the vaccines had already begun.

Funds were made available for Research & Development, and under the Atmanirbhar scheme, *"thousands of crores"* were provided to enterprises in the sector.

"Today, seven companies are carrying out vaccine production" in India, and *"three new vaccines are under trial."* He acknowledged experts' concerns that children were at an increased risk in the upcoming waves, and proclaimed that *"two vaccines were under trial for the purpose."* He also spoke about the development of a nasal vaccine, which if successful, would be extremely helpful in speeding up India's vaccination drive.

Role of states

Heavily laced with sarcasm and political undertones, the Prime Minister held several states accountable for their underwhelming performance in handling the pandemic.

As cases reduced, voices were growing about *"the centre's autonomy in managing the pandemic, even though healthcare was a state subject...their demands were accepted and a broad framework was created to let the states manage some part of the pandemic."*

While the centre was moving towards a free-vaccination drive, the states expressed their interest in managing the vaccination drive themselves. After much deliberation, it was agreed that 25% of all pandemic management would be allocated to the states he stated.

Big announcements

The Prime Minister then made some important announcements. **"In two weeks, the centre will implement new guidelines and by 21st June, vaccines will be made available to the states free of cost."** Those unwilling to avail free vaccines can choose to go to private hospitals, whose service charge will be capped at ₹150, he said.

"India's vaccination drive is one among the fastest in the world, faster even than some developed countries", he stated with pride.

The PM also praised the CoWin platform, which is currently being used for vaccine booking by citizens. He said, **"it is being talked about in the world."**

His final significant announcement was, **"today we have decided that the Pradhan Mantri Garib Kalyan yojana will go on until Deepavali...more than 80 crore people will get free ration."**

"Under the PMGKY, the centre provides free ration packages to underprivileged families. With this, the PM concluded his address.



CoWIN Platform to facilitate:

- Registration & verification of beneficiaries
- Scheduling inoculation
- SMS reminders for schedule & follow on dosage
- Reporting Adverse Event Following Immunisation
- e-Certificate post-vaccination

Do You Know?

Over **50 countries across Central Asia, Latin America and Africa** are interested in the technology of CoWIN, India's Covid-19 vaccination registration platform.





One of India's most significant economic changes - the Goods and Services Tax (GST) system went into effect on 1st July 2017.

Most indirect taxes levied at the federal and state levels were absorbed by this "**one nation, one tax**" reform, introducing tax administration uniformity.

Components

State Goods and Services Tax (SGST)

: Tax levied by the state government

Central Goods and Services Tax (CGST)

: Tax collected by the central government

Integrated Goods and Services Tax (IGST)

: Tax applicable on inter-State supply of goods and services by the central government



There is no doubt that the GST has had a **positive impact on the Indian economy**. This has **broken down trade barriers** between **states** and brought the **economy together** in a **single unified market**. This type of taxation benefits both **manufacturers and traders**. Its implementation has benefited **end customers** in a number of ways



The 44th GST Council met under the Chairmanship of Union Finance & Corporate Affairs Minister **Smt. Nirmala Sitharaman** via video conferencing on 12th June 2021, in New Delhi.

Union Minister of State (MoS) for Finance **Anurag Thakur** and finance ministers of states and Union Territories (UTs) attended.

HIGHLIGHTS

A. Medicines		Existing	New
1.	Tocilizumab	5%	Nil
2.	Amphotericin B	5%	Nil
3.	Anti-Coagulants like Heparin	12%	5%
4.	Remdesivir	12%	5%
5.	Any other drug recommended by Ministry of Health and Family Welfare (MoHFW) and Dept. of Pharma (DoP) for Covid treatment	Applicable Rate	5%
B. Oxygen, Oxygen generation equipment and related medical devices			
1.	Medical Grade Oxygen	12%	5%
2.	Oxygen Concentrator/ Generator, including personal imports thereof	12%	5%
3.	Ventilators	12%	5%
4.	Ventilator masks / canula / helmet	12%	5%
5.	BiPAP Machine	12%	5%
6.	High flow nasal canula (HFNC) device	12%	5%
C. Testing Kits and Machines			
1.	Covid Testing Kits	12%	5%
2.	Specified Inflammatory Diagnostic Kits, namely D-Dimer, IL-6, Ferritin and LDH	12%	5%
D. Other Covid-19 related relief material			
1.	Pulse Oximeters, incl personal imports	12%	5%
2.	Hand Sanitizer	18%	5%
3.	Temperature check equipment	18%	5%
4.	Gas/Electric/other furnaces for crematorium, including their installation, etc.	18%	5%
5.	Ambulances	28%	12%

These rate reductions/exemptions shall remain in force up to 30th September 2021.

Do You Know?

Definition of GST: Goods - “every kind of movable property”. **Services** - “**anything other than goods**”.

How will GST benefit the economy?

Smooth movement of goods across states with single taxation. Earlier each state had different tax structures. This led to increase in prices of commodities.

Facilitating foreign investors who were reluctant to invest earlier due to its complicated tax structure.

In 2000, PM Vajpayee started a discussion on GST by setting up an empowered committee headed by Asim Dasgupta, then Finance Minister of West Bengal.

About 160 countries in the world have GST in some form or the other.

France was the first country to introduce GST.

After the implementation of GST, **sales tax, service tax, customs duty, excise duty, VAT, Octroi tax etc., do not exist.**



Social Media Policy – A 360^o Perspective

Shri Bharath

Introduction

On 25th February 2021, the Ministry of Electronics and Information Technology (MeitY) notified the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 to replace the 2011 version of the guidelines.

This is applicable to social media, digital media and OTT platforms.

Coming after Twitter’s refusal to comply with some of the Government’s orders regarding the farmers’ protest, it was seen as a tussle between Twitter and the Government, which it clearly is not. In fact, this perspective amounts to trivializing a very **serious issue that many governments across the world face.**



While social media intermediaries (SMIs), digital media and the OTT platforms have some concerns with these rules, it is only those highlighted by SMIs that has caught public attention.

Let us see how the regulations evolved.

Evolution of Intermediary Immunity and Due Diligence

In the IT Act, 2000, only network service providers enjoyed immunity. In 2008, Section 79 of the Act, which provides immunity to SMIs in certain situations was introduced.

In 2011, the **Intermediary Guidelines Rules were introduced** and the intermediaries were mandated to exercise **‘due diligence’ for claiming immunity**.

In a judgment the Supreme Court held that the **immunity under Section 79 can be claimed by an intermediary** if, upon a court or government order, **it quickly removes objectionable or unlawful content**.

Global and National perspective

Many governments across the globe feel that social media can and should do more to prevent misuse and abuse. In 2019, after India started insisting on the traceability of **‘first originators’** to curb fake news, authorities from the US, UK and Australia wrote a joint letter to the Facebook Chief not to proceed with end-to-end (E2E) encryption without a technology solution for ensuring lawful access to protect users. UAE has a list of prohibited content which the media, including the SM, should abide by.

Noticeably, western SM giants have not raised freedom of choice or diversity issues with US or UK as they have with India. India is one big nation that has come out with a decisive policy for intermediaries and is being keenly watched by US, UK, EU, Australia and others, to understand how it evolves.

Additionally, there is serious concern regarding use of SM by terror outfits globally for various purposes. Undoubtedly there needs to be regulation of these platforms and they have to own up responsibility to claim immunity. Their processes and procedures have to become more transparent.

For example, it’s unclear how and why Twitter suspends some accounts and permits others for similar content, or how it tags certain posts as ‘manipulated media’ while with other similar posts, such due diligence is not done.

What are the new rules?

These attempt **to make digital media more accountable and transparent and empower the users.**

As per these, the intermediaries are categorized as **‘Social Media Intermediaries (SMIs)’** and **‘Significant Social Media Intermediaries (SSMIs).’**

These have to exercise **due diligence, institute a grievance redressal mechanism and ensure online safety and dignity of users**, especially women (eg: removing objectionable content within 24 hrs of complaints).

In addition, the SSMIs have to appoint a **Chief Compliance Officer, a Nodal Contact Person, a Resident Grievance Officer, publish monthly compliance reports, identify the first originator, and provide users an opportunity to be heard** if they are disabled access.

The **OTT platforms** also have to classify content into five age-based categories. Digital media news publishers have to observe norms of journalistic conduct of the Press Council of India and the programme code under the Cable TV network regulation. A three-level grievance redressal mechanism has been instituted.

With this backdrop, it would be worthwhile to understand the perspectives of the various stakeholders.

(I) THE GOVERNMENT

India as a country has the responsibility to protect its sovereignty and integrity.

The new rules are mainly to stop misuse and abuse of social media and provide a robust and transparent system of grievance redressal for the users.

Many governments are trying to balance between free speech and promotion of violence, terrorism, pornography, etc. The Government has the power to enact laws and rules that it deems necessary, which be challenged in the courts. Any entity doing business in India has to comply with the Indian laws.

(II) INTERMEDIARIES

These have a responsibility towards the users, whose privacy and the right to free speech cannot be compromised.

Breaking the E2E encryption has risks from a privacy and freedom perspective. Someone sending a downloaded article/picture could become the originator, despite not being the creator of content. Many nuisance investigations on innocent users could result. Some of these requirements push up the cost.

(III) EXPERTS

The new rules are a dampener for the platforms built of free and open-source software (FOSS), as no distinction is made between a company like WhatsApp which is a for-profit enterprise and Signal, which is not-for-profit. The cost burden and additional compliance for SSIMs, will discourage start-ups and impact the overall economic progress.

These may compel the SMIs to depart from their global practices to cater to Indian laws, creating a rift between their global platform and the local one. The act should provide further clarity on the enforcement mechanism of the rules.

(IV) USERS

SMIs helping to disseminate information and give expression to thoughts need protection. However, users should not get mired in unnecessary investigations. **Every message circulated does not suggest complete acceptance of the content.** At times, messages get circulated even to study and counter.

Users also need grievance redressal and better answerability from the platforms they use.

(V) COMMON CITIZENS

Anybody doing business in India should be subjected to Indian laws. While SMIs can question the law/rules, they need to comply first and then challenge.

The government of a country providing a market of 700 million users, deserves to be respected. For an intermediary to tell a Parliamentary Committee that it abides by its own policies rather than the laws of the land, smacks of misplaced superiority.

The way ahead

The relatively new digital media laws have still to evolve. The Government has to work on drawing a line between free speech and promotion of impropriety, violence and terror etc. It can facilitate dialogue with the stakeholders to arrive at a consensus on specific concerns after convincing itself about the readiness of the intermediaries to comply.

Now, which of these stakeholders is going to have the last word on the subject? **None.**

WhatsApp has approached the Delhi High Court primarily on the traceability issue and thus the Court shall be the final arbiter, deciding whether the intermediaries can be 'blue ticked' or 'suspended.'

Do You Know?

Information Technology Act (2000): The primary law in India dealing with cybercrimes and e-commerce.

Due diligence: an investigation to confirm facts / details of a matter under consideration.

First Originator: The person who initiates a message.

Social Media Intermediaries (SMIs): Communication and network platforms.

Significant Social Media Intermediaries (SSMIs): platforms with >5 million users.

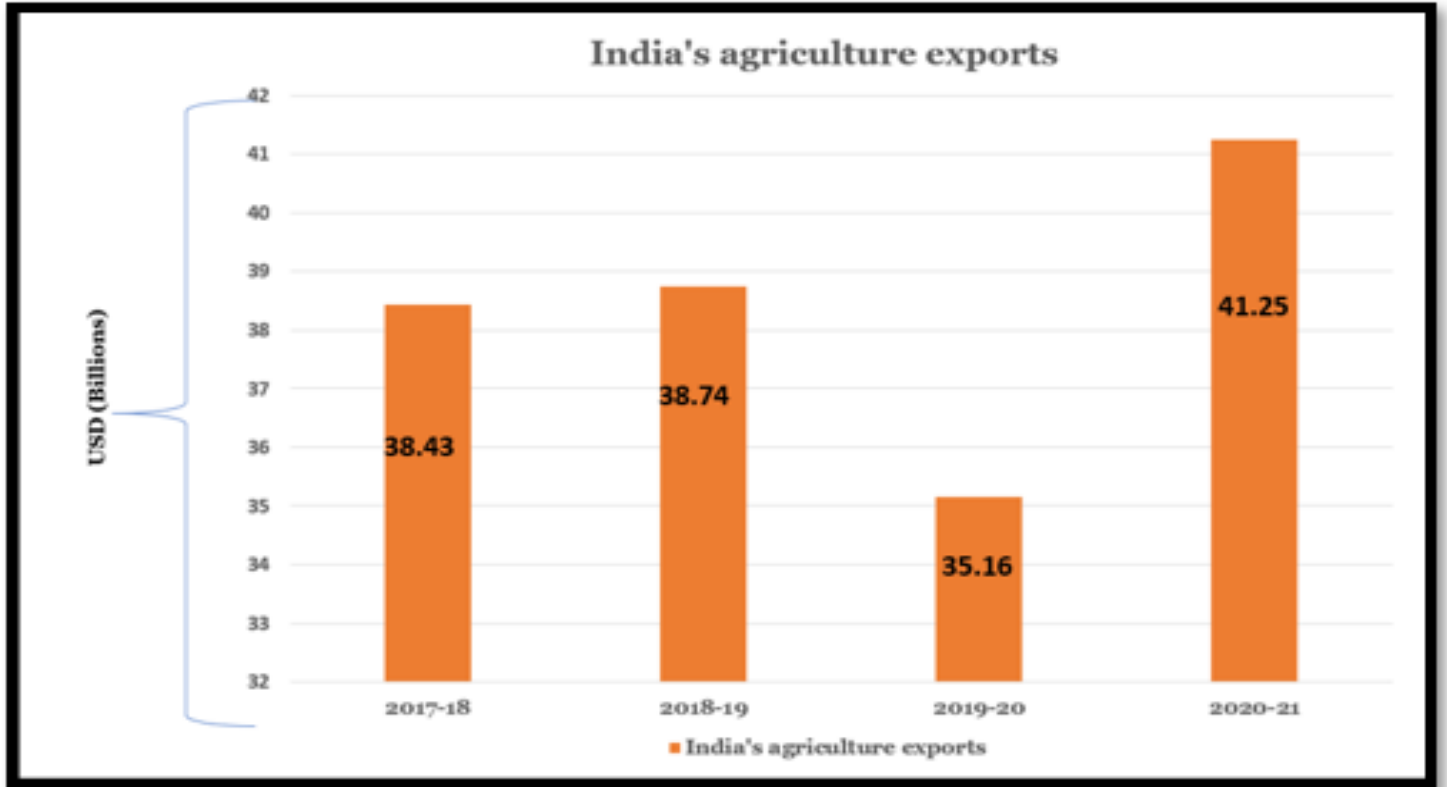
Free and Open-Source Software (FOSS): Freely available software.



INDIA'S AGRICULTURAL EXPORTS LEAP

Kum Priyadharshini

Despite the pandemic, India's agriculture exports (including marine and plantation products) have grown. Commerce secretary **Anup Wadhawan** said that agri-exports registered **17.34%** growth (\$ 41.25 Billion) in FY21 surpassing that of previous three years.



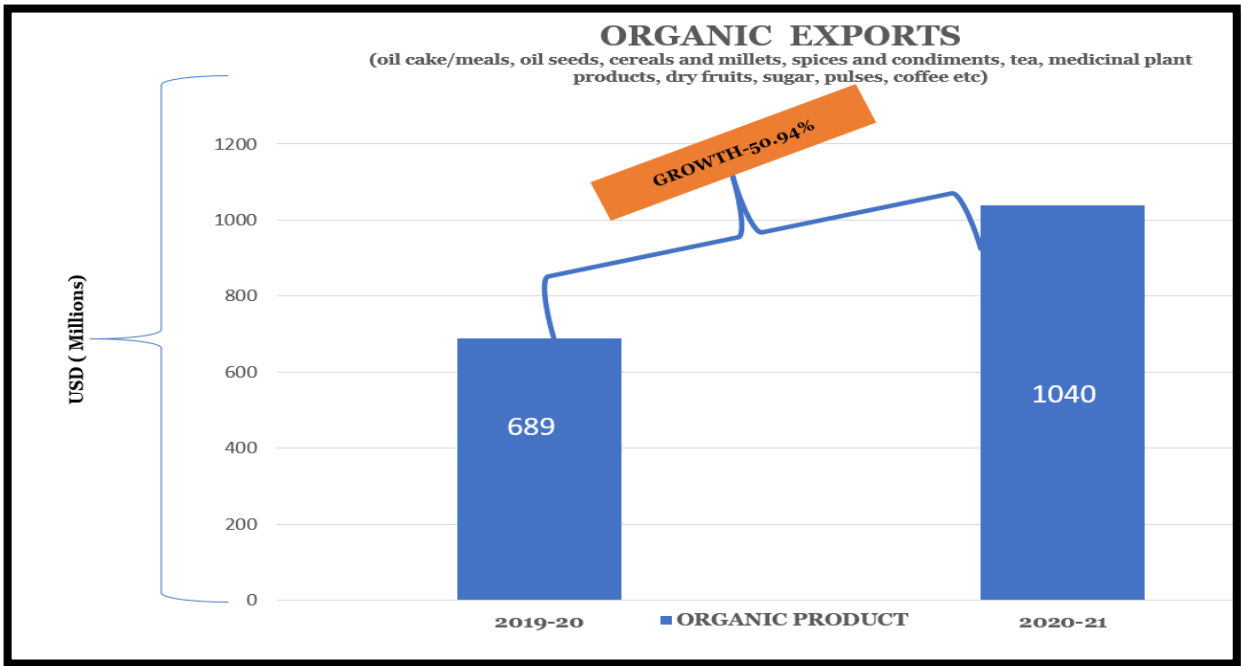
Export Growth in Pommodities

COMMODITIES	GROWTH IN %	USD Millions
NON BASMATHI RICE	136.04 %	4794.54
WHEAT	774.17%	546.16
OTHER CEREALS	238.28%	694.14

Export Growth in Other Agricultural Products

AGRICULTURAL PRODUCTS	GROWTH IN %	USD Millions
COOKING OIL	90.28%	1575.34
SUGAR	41.88	2789.97
RAW COTTON	79.43	1897.20
FRESH VEGETABLES	10.71%	721.47
VEGETABLE OIL	254.39	602.77

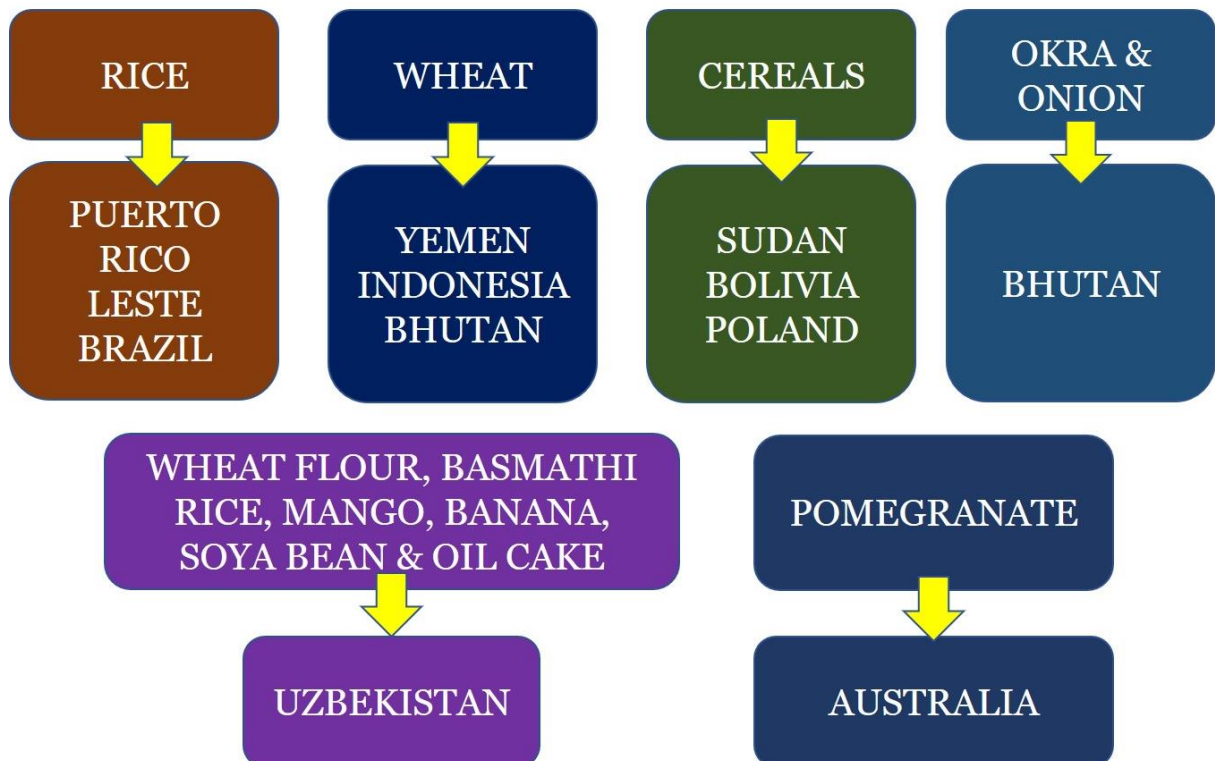
Spices with documented therapeutic properties have seen a significant increase in export. Spice exports peaked at roughly USD 4 billion in 2020-21, the highest level ever.



Exports have also taken place from several clusters for the first time.



New Markets for India



Fresh horticulture produce was exported through multimodal mode and consignments were shipped by air and sea.

Eighteen states have completed their specific action plan to implement the agri export policy.

The Department of Commerce has been working with the Department of Agriculture to help Indian products achieve market access.

Export Inspection Council (EIC) testing was made mandatory for Basmati exports to the EU

(European Union), which led to a decrease in the frequency of alerts.

During the Kharif season of 2020, Punjab banned the sale of nine chemicals, including tricyclazole and buprofezin so as to improve the quality of exported products and reduce pesticide residue.

The new Services Exports from India Scheme will be based on stakeholder feedback and other inputs.

Do You Know?

MRL (Maximum Residue Level / Limit) is the maximum amount of pesticide residue expected to remain on food products when a pesticide is used according to label directions, and not harm human health.



Mentoring Young Minds

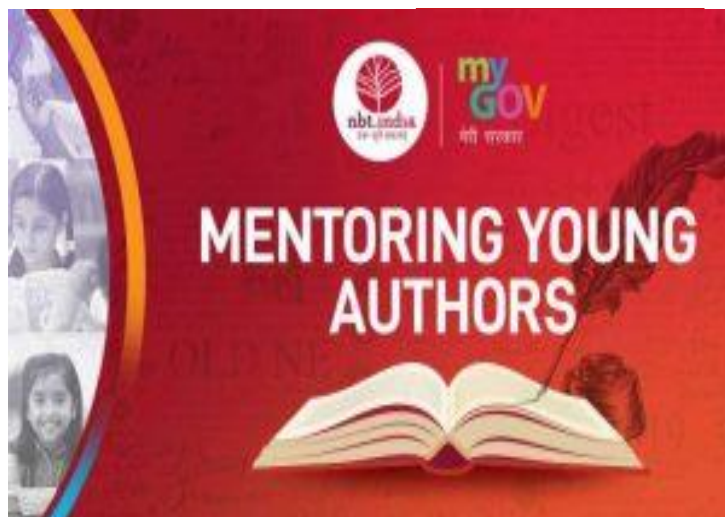
On 29th May 2021, Union Ministry of Education launched the 'YUVA'(Young, Upcoming and Versatile Authors) mentorship programme to commemorate 75 years of Indian independence and to train young and emerging writers below 30 years of age.

This scheme will develop writers to write on varied subjects to promote Indian heritage, culture and knowledge systems, and cement the foundation of these future leaders.

Highlights

- ➔ 75 authors, selected through an **All-India Contest** conducted from 1 June - 31 July 2021.
- ➔ Result announcement - 15th August 2021.
- ➔ Training by eminent authors/mentors; manuscripts will be readied by 15th December 2021 for publication.
- ➔ Books will be launched on 12th January 2022 (National Youth Day).
- ➔ A consolidated scholarship of Rs.50,000 per month for a period of six months per author will be paid.

Smt Sudipta Sinha



How to participate

- ➔ Visit the official website- <https://www.mygov.in/>
- ➔ Go to the 'Innovate India' section innovateindia.mygov.in/yuva/
- ➔ On the login page register yourself
- ➔ Sign in using the ID password generated
- ➔ Fill the form and submit

So, young brigade put on your thinking caps, pick up your mighty pens and give shape to your powerful thoughts. India is waiting!





Increased carbon emission in the atmosphere causes global warming and climate change.

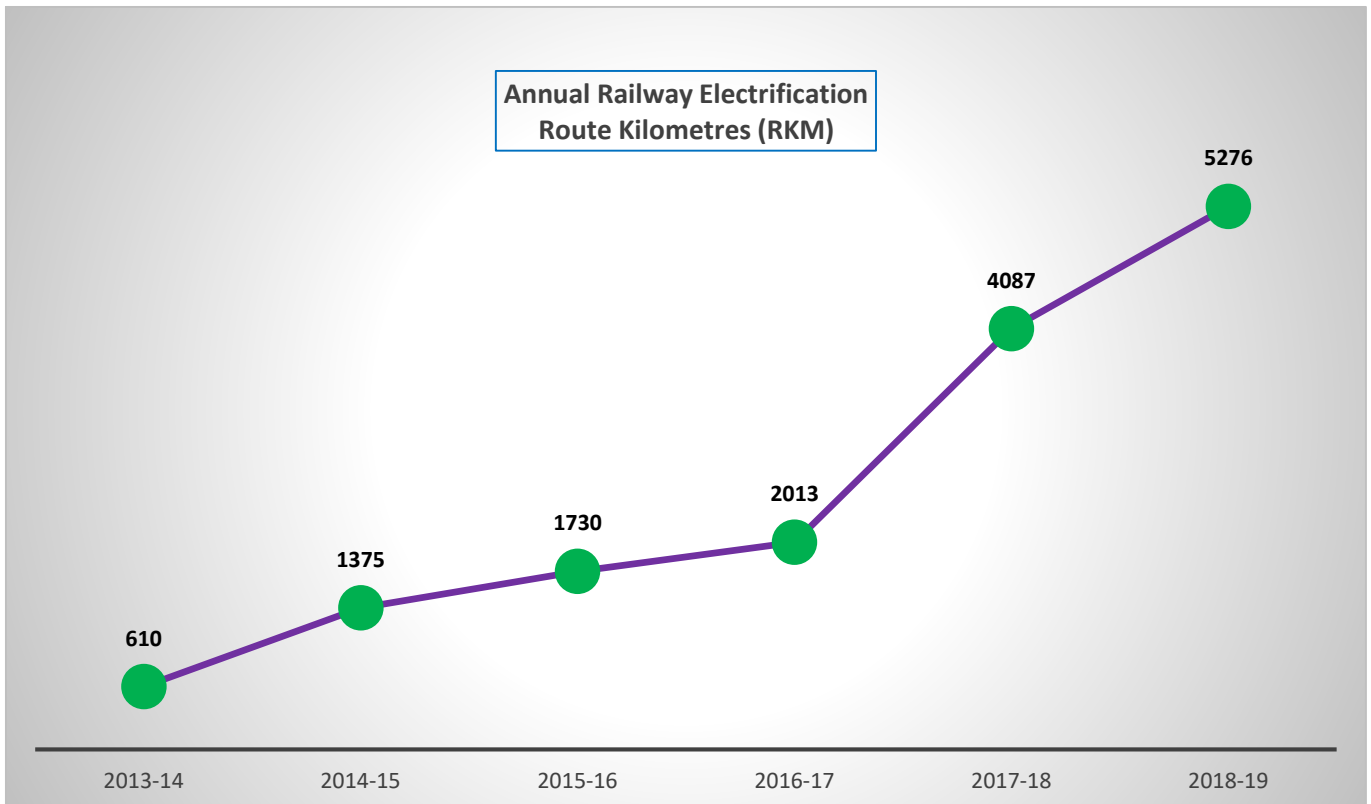
Indian Railways (IR) has declared its ambitious goal of moving towards 'net-zero carbon emission' before 2030.

IR has completed electrification of more than **40,000 RKM** (63% of Broad-Gauge routes), in which **18,605** km work was done during 2014-20 compared to 3,835 km in 2009-14.

Despite the crippling pandemic, 365 km major connectivity work has been commissioned.

The conversion of **505** pairs of trains to HOG will result in the saving of approximately **70 million litre diesel/Rs. 450 crore** per annum.

The HOG system to would bring down yearly CO₂ and NO_x (Nitrogen Oxides) emissions, currently at 1724.6 tonnes/annum and 7.48 tonnes/annum respectively, to zero.



IR is determined to achieve the green goal by utilising solar and wind energy.

100 MW Solar plants have been enabled on the roof-tops of **900 stations**; 400 MW are under execution.

It also has commissioned **103 MW** wind-based power plants and planned to set up 200 MW

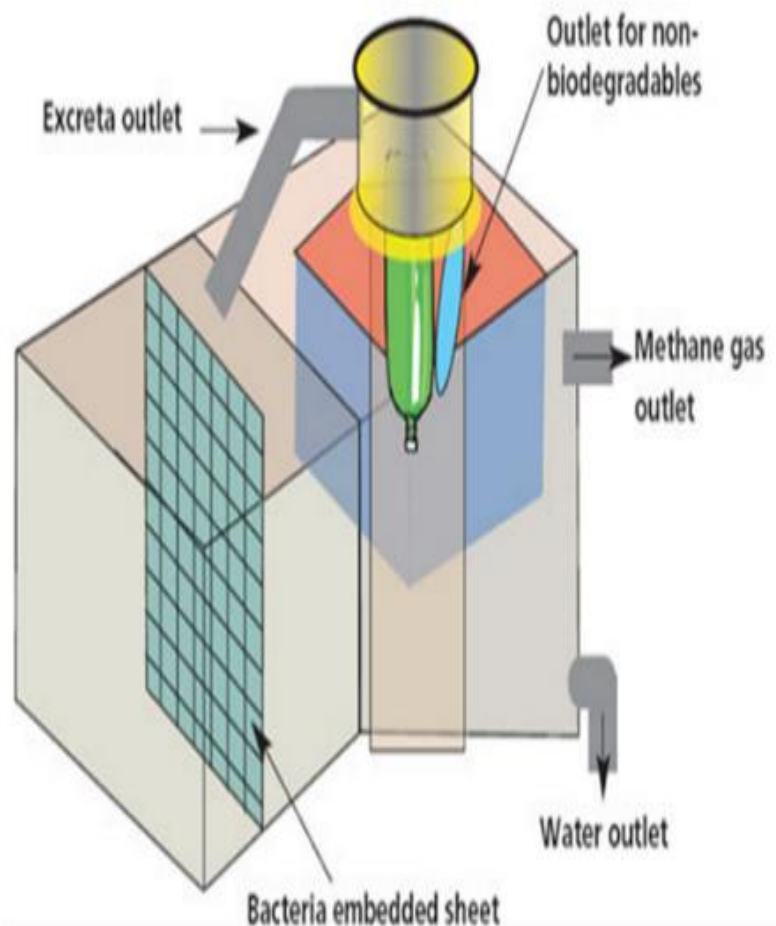
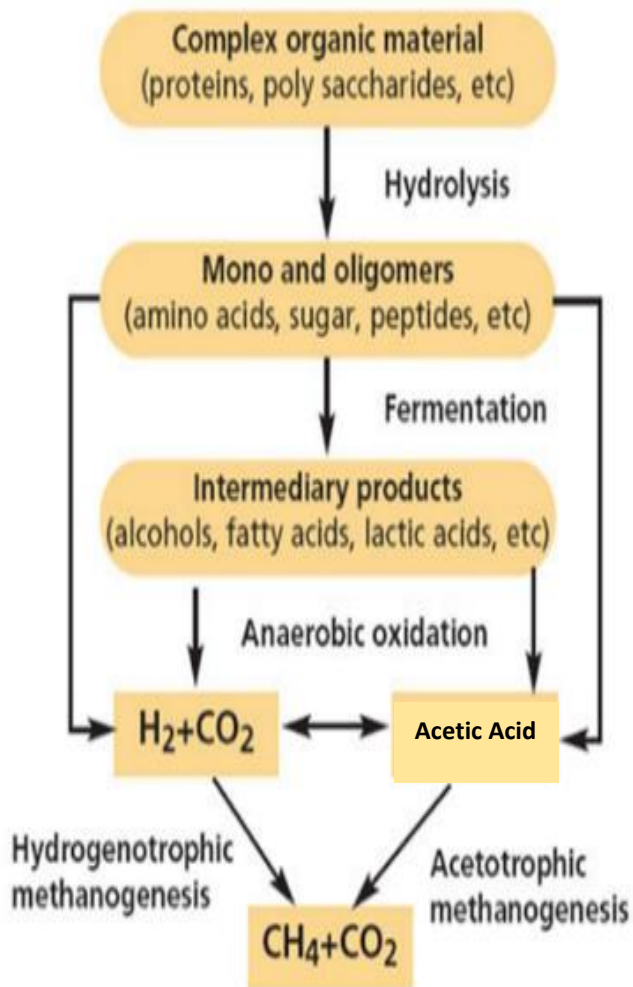
plants in Tamilnadu, Gujarat, Rajasthan and Karnataka.

A total of **69,000 coaches** have been fitted with **2, 44,000 bio-toilets** in Indian Railways.

It has acquired Green Certification for 39 workshops, 6 diesel sheds, 14 railway stations and other 21 campuses.

HOW BIO TOILETS WORK

Reaction



Do You Know?

Bio-toilet is a **mechanized toilet system** which decomposes human excretory waste in the digester tank using specific high graded bacteria (aerobic or anaerobic) further converting it into methane gas, Carbon dioxide gas and water.

HOG (Head on Generation) is a system of drawing power supply through converters provided in electric locomotive for AC, lightings, fans etc.



Defence Minister Rajnath Singh has approved a policy on the collection and maintenance of India's war histories.

What will the policy do?

The policy will clearly guide the Ministry of Defence and its departments through the procedures involved in **archiving, declassification, and compilation** of war histories, plugging the gaps left out in previous policy documents.

While India has not lacked rules, the challenge has always been in their implementation, because most policy documents are not clear on 'how' they can be implemented, making action difficult.

This policy efficiently lays out clear deadlines and appoints people responsible for the job.

For instance, the [Public Record Rules of 1997](#) direct the government to "authorize an officer not below the rank of an Under Secretary" to evaluate and downgrade the classified records.

But this policy clearly says it should be the Joint Secretary to the MoD responsible for it.

It re-emphasises the need for **declassification** of war documents such as letters, notes and operational record books among others **within 25 years**.

The [Public Records Act, 1993](#) and the Public Records Rules are already clear about the timelines in which records must be reviewed for declassification and sent to the National Archives for upkeep.

However, they lack in creating accountability among the officers carrying out the task, which the new policy addresses.

Henceforth, the History Division of the MoD is responsible for coordination between different departments while war histories are compiled and published.



However, the policy does not mandate the involvement of "prominent military historians" for the job, instead making it optional.

The new policy brings **clarity on the timelines in which different tasks will be carried out**.

For instance, the committee responsible for war histories shall be formed within two years of the conclusion of the war or operation, and the **compilation must be completed within three years** and distributed to all concerned.

This means, **within five years of a war / military operation, there will exist a detailed, published record of it that can be used by the Armed Forces to learn from past mistakes and develop newer strategies for the future**.

The need for such a policy is not new. It was recommended on multiple occasions, once by the Kargil Review Committee and then by the N N Vohra Committee.

The policy will help counter unfounded rumours (sometimes spread by enemy states) and provide academics with official and authentic research material.

Do You Know?

Declassification - Stating officially that political or military information is no longer secret.



Nanda Devi–First Women Patrol

Smt Sarada Devi Ravatu

Forest inspectors **Durga Sati**, 32, **Mamta Kanwasi**, 33, and forest guard, **Roshni Negi**, 25 became the **first** in the country to guard the **forests** of **Nanda Devi**, the second highest mountain in India after Kangchenjunga and the 23rd highest peak in the world.

FACTFILE

Location

Chamoli district,
Uttarakhand.

Elevation

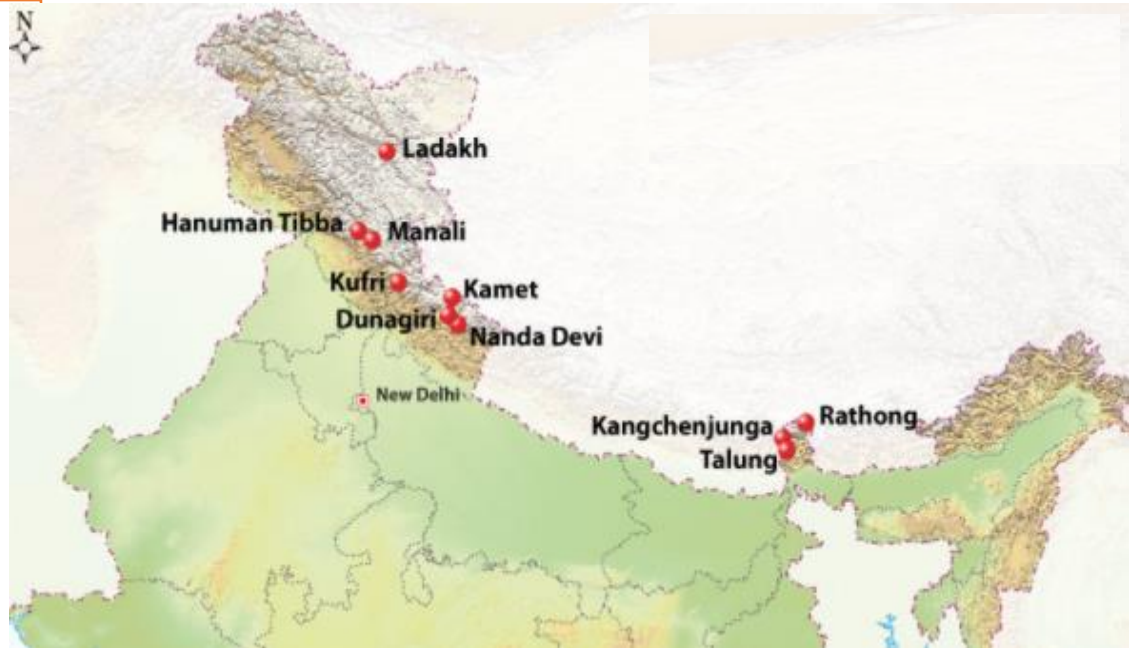
7,816 m

First ascent

August 1936

Mountain range

Garhwal Himalayas



Due to the difficult terrain, till now only men were deployed in the Nanda Devi Biosphere area. Women officers were not allowed to patrol beyond 11,150 feet, but now these women will go on to patrol the area crossing high glaciers to

- collect information about the forests and wildlife
- monitor the water sources
- ensure the safety of the territory
- prevent smuggling of herbs, poaching, illegal felling of trees, and encroachment

Commencing on 1st June, the team trekked to Bhelta (11,800 feet); then to Lata Khark (12,800 feet), and made their way up to Jhandidhara (13,800 feet) and finally reached their destination Dharasi (14,500 feet).

The women officers were trained under Range Officer **Chetna Kandpal**.



Do You Know?

The 2021 Uttarakhand flood was caused by a portion of the *Nanda Devi glacier* breaking off, releasing the water trapped behind the ice, and causing a **glacial lake outburst flood**.



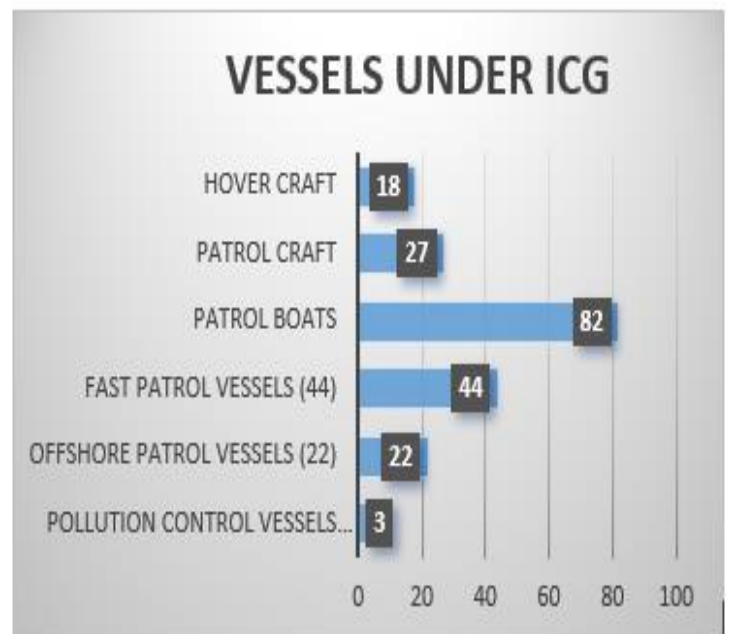


As part of the **Atmanirbhar Bharat** vision, three indigenously-built **Advanced Light Helicopters (ALH) MK III** were inducted into the Indian Coast Guard (ICG).

The helicopters, designed and manufactured by Hindustan Aeronautics Limited (HAL), will enhance Coast Guard capabilities: **rescue operations, medical evacuation, humanitarian missions, pollution response missions** etc.

Defence Secretary Dr Ajay Kumar said, "The state-of-the-art helicopters with advanced sensors will enable ICG to take up challenging tasks. This is for the first time **Performance-Based Logistics**, a modern management practice, is being introduced in the Indian Aviation sector, to increase operational and maintenance efficiency. The sophisticated helicopters will be a game-changer in the times to come."

The Ministry of Defence (MOD) mentioned that The Great Indian Peninsula shares maritime boundaries with littoral states that are highly susceptible to illegal activities and the regions are prone to frequent cyclones too. These ALH MK-III will ensure seamless surveillance and assist fishermen during a disaster in the sea.



Do You Know?

Littoral states are situated on the shore of a sea, river or lake.

Hindustan Aeronautics Limited (HAL) is a government-owned aerospace and defence company, established in Bengaluru (1940).

Performance based logistics is a strategy for cost-effective weapon system support.



NSA Commissions 'SAJAG'

Smt Ramamani N

National Security Advisor (NSA) Shri Ajit Doval commissioned **Indian Coast Guard (ICG) Offshore Patrol Vessel (OPV) Sajag** through digital means for safeguarding our maritime interests. OPV is a highly versatile ship designed to ensure security and disaster management in coastal areas.

The word **Sajag** meaning 'vigilant' is symbolic of ICG's commitment. The magnificent Sajag is the **third out of five OPVs** built by **Goa Shipyard Limited** under the **Make in India Policy**. It is fitted with advanced technology equipment, weapons and sensors.



ICG performs diverse roles like rescue operations during cyclones, marine pollution response and anti-narco operations (opposing illicit narcotic drugs, their use and distribution).

Features

- ➔ Displaces approximately **2350** tons (GRT).
- ➔ Propelled by two 9100 KW diesel engines to attain a maximum speed of 26 knots (1 knot= 1.85 kph).
- ➔ Has an endurance of 6000 nm (nautical miles; 1 nm= 1.852 km)
- ➔ Can carry a twin-engine helicopter and four high-speed boats.

Do You Know?

- ➔ **The other four OPVs** built by Goa Shipyard are Indian Coast Guard Ship (ICGS) Saksham, ICGS Sachet, ICGS Sujeet and ICGS Sarthak.
- ➔ **The ICG personnel** are **recruited through an exam** named **Indian Coast Guard Navik**. The candidates must have scored a minimum aggregate of 50% in XII with Mathematics and Physics from a recognized Board.
- ➔ **Goa Shipyard Limited (GSL)** is an Indian Government-owned shipbuilding company located at Vasco da Gama, Goa.
- ➔ **Gross register tonnage (GRT)** represents the total internal volume of cargo vessels. 1 GRT = 100 cubic feet.

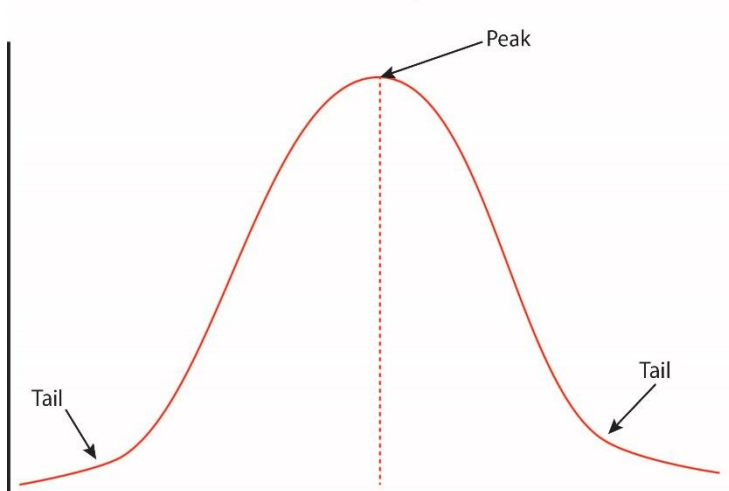


Is India's COVID Curve Flattening?

A typical **epidemiological curve** of a viral epidemic is bell shaped.

There is an initial flat phase when infections are sporadic and then a sharp uptick when the infection moves into community, spreading rapidly; then a flattening, followed by a down swing.

Normal bell shaped curve



What is Epidemiology?

Epidemiology is the study of data distribution, patterns of diseases in a given population.

Why study epidemiology?

Epidemiological study may not be about labs, white coats and instruments.

It is more statistics inference and prediction. Infection outbreak could be sporadic, localized in different places.

It is epidemiological study which connects the dots, spurs the government and health authorities into action and formulate appropriate interventions.

The biggest land mark studies in diabetology and cardiology got underway after some epidemiologist showed huge prevalence of such diseases.

An epidemiological curve is a quick reference point, dipstick method to see if governmental action to limit the spread of a virus is working.

What does flattening of a curve mean?

When a country has fewer number of cases emerging than the days past, then it is reasonable to say that the curve is flattening.

However, while drawing significance from a curve, many things have to be factored in.

Some errors do occur while constructing an epidemiological curve like over reporting, under reporting, misleading questionnaires, ambiguous questions, time lag in reporting etc.

While analyzing a curve, analysts keep a tab on some scientific mathematical tools like R_0 (pronounced as R nought), the infectious rate of a virus, positivity rate (number of tests turning positive for a given number of tests (usually hundred) etc.

If these data correlate with the shape of the curve, then predictions about the future course of the disease becomes sharper.

DAILY NEW CASES (7-day rolling average)



The above illustration gives us an idea of flattening of India's Covid curve. For a period of 12 days from 1st May to 12th May, only some 4000 cases were added, which is less than 1% of the cumulative number.

The very term flattening of a curve is good news. Simply put, the number of new infections is steady, not increasing. It is a good foreboding and if successful measures are taken, a flattening curve will take a downward spiral.

Several methods are undertaken to flatten a rising viral infection curve like handwashing, social distancing, wearing mask, isolation, increasing frequency and number of testing etc. A significant flattening of India's covid curve was evident during September 2020.

The cumulative caseload remained static for 14 straight days at 934000. The arrival of therapy like vaccines hastens the downward spiral faster.

Flattening of India's Covid curve has relevance to a period and place. Covid curve might be flattening in one state but will be in a downward spiral in another state, for India is a vast country. So, state wise curve should be taken seriously for relevant predictive value.

As of the fourth week of June, thanks to various preventive measures and steady rate of vaccination, the number of cases has NOT been increasing, which gives a semblance of flattening.

The most important response would be to prevent complacency and continue Covid safety protocols.

The most updated curve can be obtained using this link

<https://graphics.reuters.com/world-coronavirus-tracker-and-maps/countries-and-territories/india/>



Mixing COVID Vaccines: Benefits & Concerns Smt S Nandhini



India rolled out the world's largest vaccination drive against coronavirus and is currently administering doses of COVAXIN, COVISHIELD and Sputnik V. However, vaccinating people with different types of vaccines **is yet to be approved**.

All these vaccines would be produced using mRNA, viral vector, recombinant protein, and DNA technologies. With these vaccines, India stands a chance to conduct trials on combinations of vaccines that have not yet been tested globally.

What is the Benefit of Mixing Vaccines?

Better Immune Response

Some scientists believe that using a different vaccine for the second dose could potentially boost the immune response. This may especially be true for viral vector vaccines like Covishield/AstraZeneca.

Mutants and Variants

Mixing and matching vaccines of different technology may give protection against the mutants and variants of the SARS CoV 2 virus. Theoretically, according to research Astra Zeneca has less efficacy against the Delta variant. If this is true then it is only better that those who received Covishield as the first dose, be given another vaccine as the booster dose.

Shortages in Supply

Mixing of vaccines helps in **completing the entire course of vaccination with full safety** and in **countering the shortage / unavailability** of a particular vaccine dose brand.

Concerns

Covid vaccines have been authorised for emergency use after fast-tracked trials. Questions about safety and better immunity are still being answered.

Order of Mixing: Even the order of mixing and matching needs to be closely studied — which would be better - Covishield before Covaxin or vice versa?

Combinations yet to be Tested

Some vaccines like Covaxin are yet to be tested for their possible side effects in a combination scenario.

Differences in Vaccines

International bodies like the Coalition for Epidemic Preparedness Innovations have drawn attention to differences in the vaccines with regard to

- shelf life
- shipment and storage conditions
- reactions in patients with specific ailments.

Hence due attention must be paid before we embark on mixing the vaccines.

What's the Way Ahead?

Theoretically, as of now, it's a possibility, but the decision must be taken after due consideration.

The Indian government is expecting about eight COVID-19 vaccines by December 2021. This gives India an opportunity to test combinations not tried globally. With some of the upcoming vaccines expected to be cheaper and easier to mass manufacture, successful combinations of these could especially be useful for low-and middle-income countries struggling to get sufficient standard vaccinations.

Do You Know?

mRNA vaccines (messenger RNA) work by triggering an immune response from proteins they synthesize. They induce both cellular and humoral immunity.

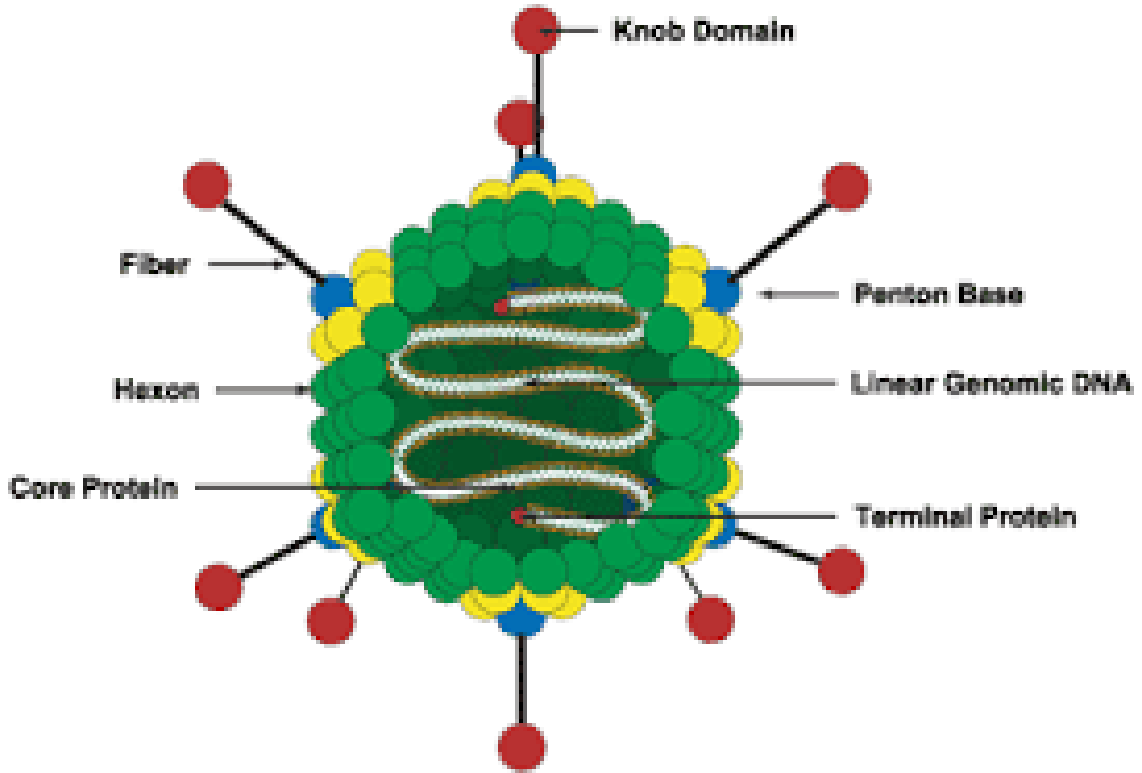
Benefits - short manufacturing times and low manufacturing costs. However, they need low temperatures due to the fragility of the mRNA.

Viral vector vaccines modify components of another viral particle and use it as a vector (vehicle) to deliver protection from the intended virus.

Some of the viruses used as vectors include [adenovirus](#). Recently this technology has been used in Ebola virus and COVID-19.

Do You Know?

Adenoviruses are common viruses causing a range of illnesses. They can cause cold-like symptoms, fever, sore throat, bronchitis, pneumonia, diarrhoea, and pink eye (conjunctivitis). One can get an **adenovirus** infection at any age.



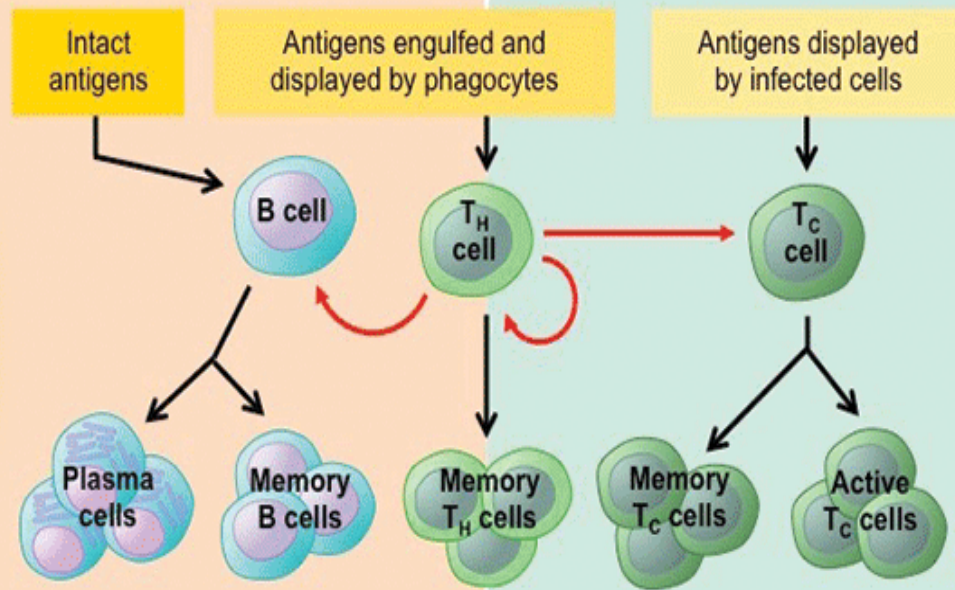
Humoral Immunity

VS

Cell mediated Immunity

HUMORAL

CELL-MEDIATED



Secrete antibodies that defend against extracellular pathogens

Defend against infected cells, cancers and transplant tissues



Toxic Childhood to Tokyo Olympics

Neha Goyal

The Indian women's hockey team made history when it qualified for the 2016 Rio Olympics after 36 years, and then followed it up with another ticket to the quadrennial event in Tokyo to be held from July 2021.

Participating in the Olympics is every athlete's dream and she is no exception, says Neha Goyal who is a part of the 16-member Indian women's hockey team.

Neha's father was an abusive and violent drunkard. Her mother Savitri Devi felt that the hockey ground was safer.

Neha's journey to the Tokyo Olympics

Neha was spotted near the ground every day by **Pritam Siwach**, an Arjuna Awardee and a member of India's 2002 Commonwealth Games gold medal-winning women's team.

One day, Siwach gave Neha a skipping rope. Looking at Neha's stamina, Siwach decided to teach her hockey.

Understanding her situation (Neha had to work alongside her mother and sisters at a cycle factory straightening spokes to earn Rs 2,000 a month), Siwach took Neha under her wings, providing her equipment, food and everything else she needed.

Speed and the knack of scoring goals saw Neha rise through the ranks and make her international debut at 18.



She's been in-and-out of the team but under **Sjoerd Marijne**, the Dutch coach of the women's team, Neha has blossomed into a sharp attacker with the ability to slip past the defence.

Giving back to the community

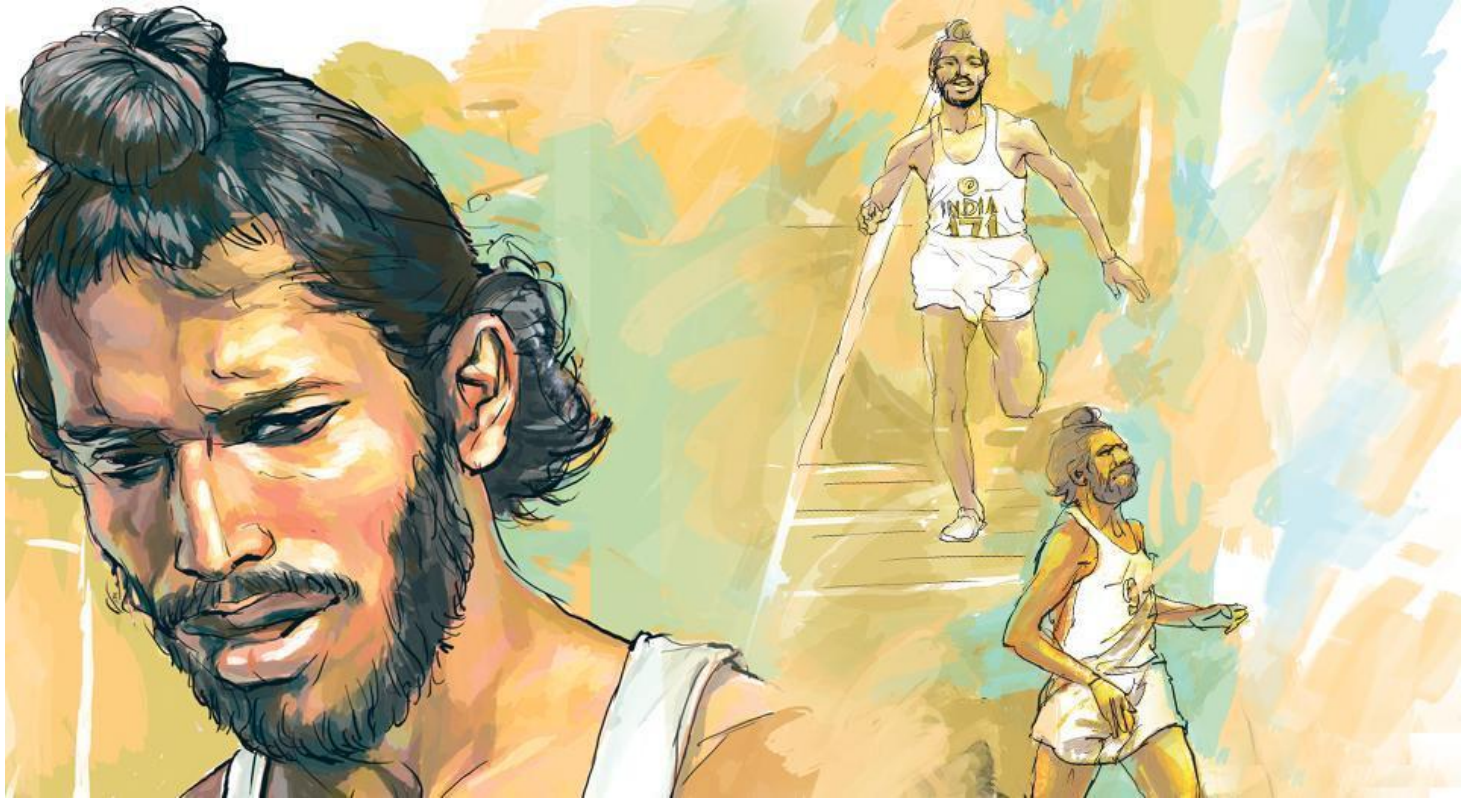
With her career earnings, Neha now provides financial support to Siwach's Academy, donating her playing kit, shoes and hockey sticks. That's not all. A couple of rooms in Neha's high-rise apartment are reserved for underprivileged players who train at the academy and can't afford a place to stay.

Do You Know?

The Olympic flag with a white background is symbolic: the five interlaced five rings in blue, yellow, black, green and red represent the five continents united by Olympism; all the national flags of the world at present have one or more of these colours in them.



The Flying Sikh



Milkha Singh (20.11.1929 – 18.6.2021) passed away following complications due to COVID-19.

The star track and field runner earned many laurels for India throughout his career. He was awarded the **Padma Shri** (2001).

Losing his parents and three of his siblings in the post partition violence, Singh moved from Punjab to Delhi.

Persuaded by his brother, he joined the Indian Army and took to sprinting which later changed his life.

With his stellar national and international performances, Milkha Singh set many records in his career. *He was the **first Indian athlete to win an individual athletics gold medal at the Commonwealth Games, a record till 2010.** He represented India in three Olympics from 1956-1964.*

PM Nehru once asked him to race against Abdul Khaliq, a Pakistani sprinter and arch-rival in 1960. **Milkha won.**

The Pakistan President General Ayub Khan remarked "**You didn't run today, you flew**" This is how Milkha became "The Flying Sikh."

Considering the lack of facilities, technology and sponsorship, his rise to stardom is immensely admirable.

However hard one's life is, with constant hard work one can reach the stars. He continues to inspire India's many aspiring athletes. He will be sorely missed.

1958 -62

four gold medals in the Asian Games in 200m, 400m and 4X400m relay.

National Games (Cuttack) – Gold – 200m; 400 m

1960 - Rome Olympics

Singh's fourth-place time of 45.73 seconds at 400 m finals remained a national record for almost 40 years.





International Yoga Day 2021 and M- Yoga App

Years ago, in the U. N. General Assembly, the Indian Prime Minister Narendra Modi presented the need to celebrate the International Yoga Day.

On **21st June 2021** we celebrated the **7th International Yoga Day** under the theme "**Yoga for Wellness**". The Prime Minister announced that India and WHO had taken an important step to get the world the **M-Yoga app**.

The app will provide many videos of yoga training based on common yoga protocol in several languages.

"The M-Yoga app will be a great example of the **fusion of modern technology and ancient science**.

I believe that the application will play a great role in expanding Yoga across the world and make the '**One World, One Health**' motto a success," he said.

PM Modi added, "The mantra of '**Yoga se sahyog tak**' will show us the way of new future and make will give power to the humanity."

But why Yoga?

In this frenzied world of hustle and bustle, are we squandering our health to secure wealth and then squandering our wealth to secure health?

Let's stop to ponder.

We keep ourselves too occupied and then wonder why our nerves are taut, our minds without ease, our nights without sleep.

The person who knows the art of perfectly relaxing his body, breath and mind has a better chance to find health, poise and peace.

The old adage Health is Wealth, holds good even today.

Our best bet to stay fit and healthy is the practice of Yoga since it is cost effective too.

Physical and Mental well-being

"A healthy body is a guest chamber and a sick body is the prison of the soul."

Yoga simultaneously stimulates our inner light and quiets our overactive mind. It gives both energy and rest. Yoga is for the overall health of the mind, body and soul.

Yoga is essentially a spiritual discipline based on an extremely subtle science which focusses on bringing harmony between mind and body.

It is the art and science of healthy living.

Traditional yoga systems include breathing exercises and asanas, chants and meditation that can reduce stress and improve immunity and lung functions.

Padmasana



Roots of Yoga

In order to examine the roots of yoga, we need to go back to the Harappan culture, dating back 3,500 years when yoga was a meditative practice.

Yoga gurus from India introduced yoga to the West. The term yoga in the Western world denotes exercise consisting largely of the asanas.

Outside India, yoga has developed into a posture based physical fitness, stress-relief and relaxation technique.

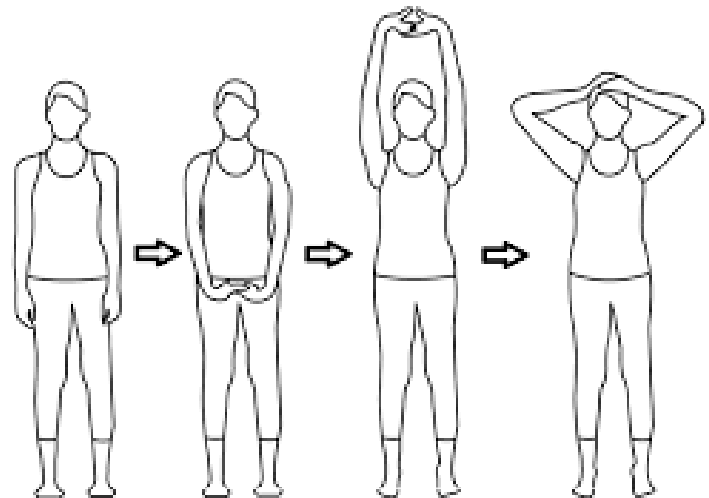
Yoga for Beginners

Padmasana, Bhujangasana, Salabasana, Tadasana and Surya namaskar will help beginners to acquire agility, feel light in body and mind, and develop mobility and power.

Bhujangasana



Salabasana



Tadasana



Ideal Time

Practising early in the morning on an empty stomach is ideal. Set aside a specific time to enjoy your yoga practice.

Ideal Place

Find a place where you are least likely to be disturbed. It could be indoors or outdoors. The surface should be even and flat.

If it is indoors, the room should be properly ventilated and with comfortable temperature.

Air-conditioned rooms are not advisable-your body becomes stiff in a cold environment. Make sure you have adequate space to move around and extend the arms and legs freely.

Ideal Wear

Wear comfortable, light, loose clothing made of natural fibres. Ensure that your dress does not restrict your movements.

Yoga Mat

Get a yoga mat for yourself and preferably no one else should use your mat. The yoga mat provides padding and a non-slip surface to practise on. It makes the practice easier and safer.

Ideal Practice

Let go of any unnecessary tension, stress or negative thoughts. Perform all the postures slowly.

Benefits

Every yoga practice is sequenced so that it alternates spine movements forward, back, sideways and rotations, in order to mobilise the whole back. It stretches, strengthens, lengthens and realigns your body.

Yoga activates all the muscles -mobilizing all the back, neck and shoulder muscles, flutes, hamstrings and calves. Yoga practise can effectively release tight areas, strengthen the weak ones that don't get enough attention, and make you aware of any imbalances in your body.

Regular practice of yoga brings **physical agility, mental poise, emotional balance, endurance and vitality**, thus developing the body to a **fine physique which is strong and elastic without being muscle -bound**. It **strengthens the bones and muscles and regulates metabolism**.

Consistent yoga practice helps you breathe better and in a way that has incredible physical as well as psychological effects.

You'd better believe it because there's a lot of science to back it up.

William J. Broad, in his 2012 book **The Science of Yoga**, argues that while health claims for yoga began as nationalist posturing, it turns out that there is "**a wealth of real benefits**".

Healing Properties

Many patients are advised yoga. Yoga goes to the root cause of disease and is instrumental in healing.

Practising Yoga regularly and being healthy will allow us admire, appreciate and enjoy all the wonderful things that life has to offer.

More recently studies have provided evidence that practice of asanas alleviates some diseases such as Asthma and Diabetes.

Specific asanas bring additional benefits –

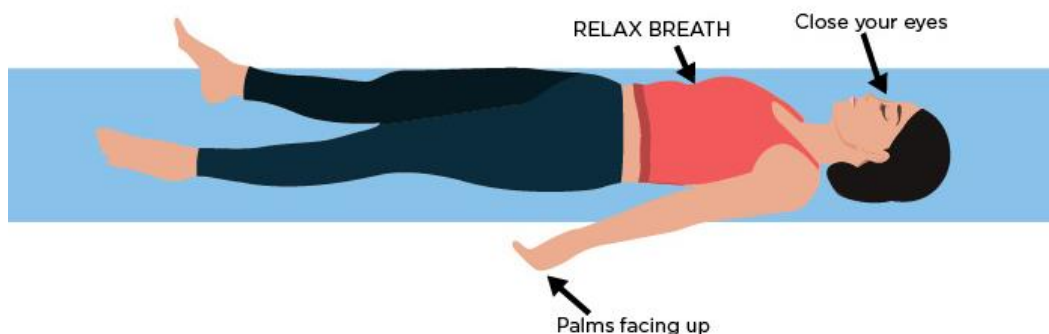
Paschimottasana stokes up the digestive fire, slims the belly and gives good health.

Shavasana takes away fatigue and relaxes the mind.

Paschimottasana



Shavasana





On 7th June 2021, the most active volcano Merapi erupted four times with lava flowing as far as 1,500 metres from the crater. The activity of Mount Merapi is still at the third-highest level.

Mount Merapi is an active Stratovolcano located on the border between Central Java and the Special Region of Yogyakarta.

Indonesian authorities had also urged the citizens not to be within a 3-km radius of the peak. People must also avoid rivers originating from Merapi, such as Boyong, Kuning, Krasak, Bedog, Putih and Bebung rivers.

Indonesia has 127 active volcanoes. About 5 million people in the country live within the danger zones.

Do You Know?

A **strata or composite volcano**, is a conical volcano built up by many layers (strata) of hardened lava and tephra (rock fragments and particles from the eruption).

Barren Island located in the Andaman Sea is the only confirmed active volcano which is part of Andaman and Nicobar Islands. It lies about 138 km northeast of Port Blair, along a chain of volcanoes from Sumatra to Myanmar.



Assam's Sixth National Park

RAIMONA National Park

A Giant Step
by Govt of Assam towards fulfilling
UN vision of
Ecosystem Restoration

New national park in **BTR**

Declared on the occasion of
World Environment Day | June 5, 2021

Highest biodiversity rich forest belt

Location

Kachugaon forest division, Gossaigaon
sub-division, Kokrajhar district



Famous for
Golden Langur
the pride of Bodoland

Variety of species

Asian elephant, tiger, clouded leopard, Indian gaur, wild buffalo, spotted deer, hornbill, more than 150 species of butterflies, 170 species of birds, 380 species of plants, several species of orchids

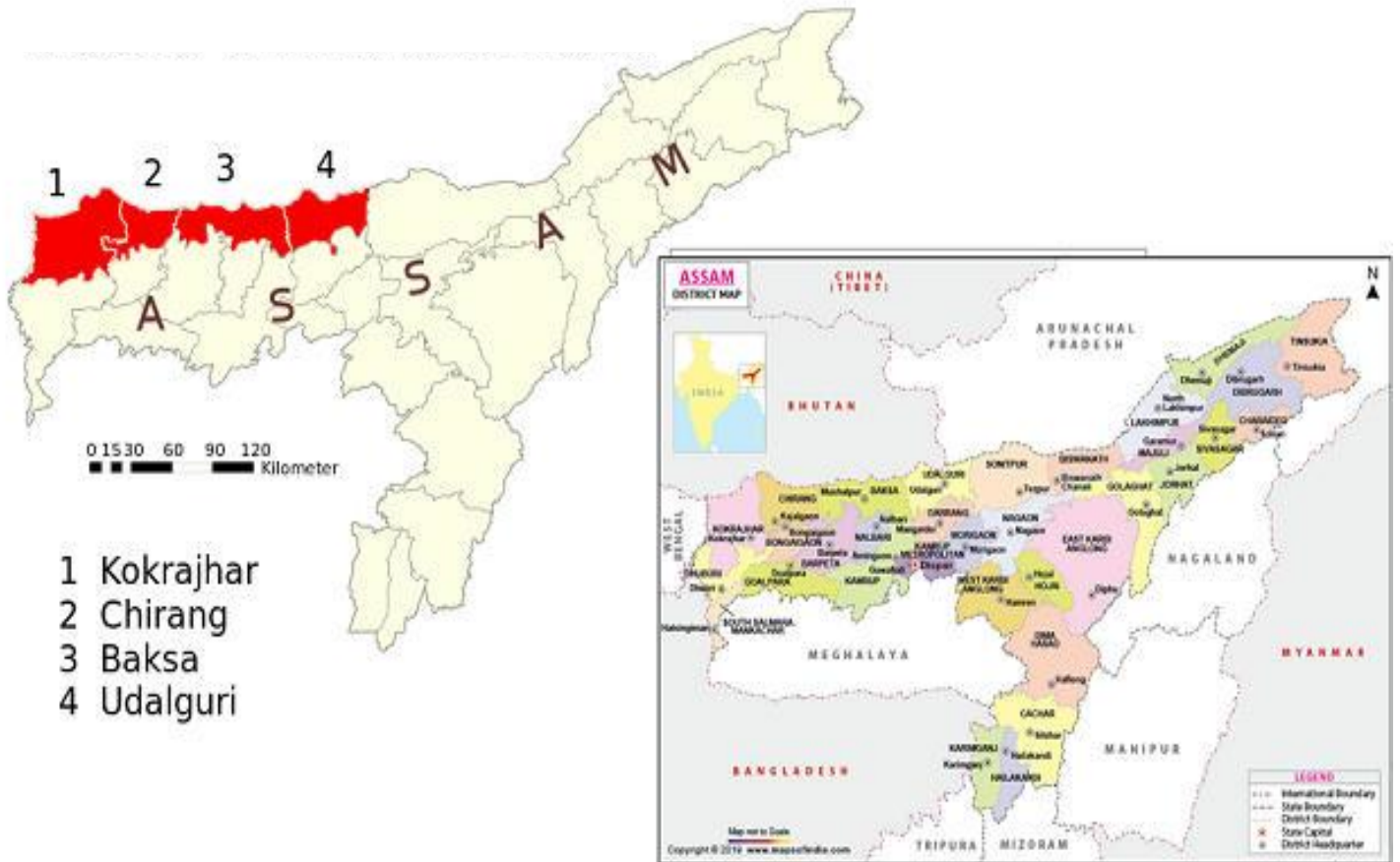
Assam Chief Minister Himanta Biswa Sarma announced that the state government has decided to upgrade Raimona Sanctuary in BTR (Bodoland Territorial Region) to a national park.

Raimona National Park

Location: Kokrajhar district in Western Assam. It is a vital part of the 2,837 sq km stretch of Manas National Park and the Chirang-Ripu Elephant Reserve and roughly covers an area of 422 sq km.

Boundaries: It is bounded on the west by the Sonkosh river along the Assam-West Bengal border running southward from the India-Bhutan border and the Saralbhanga river on the east till it touches the India-Bhutan border on the north and the southern part of the Ripu Reserve Forest.

The Pekua river defines Raimona's southern boundary. Raimona also shares contiguous forest patches of the Phipsoo Wildlife Sanctuary and the Jigme Singye Wangchuk National Park in Bhutan.



It is believed that such protected transboundary ecological settings will ensure long-standing conservation of wild and endangered species such as the golden langur which is the mascot of Bodoland Territorial Council and the Bengal tiger, Asian elephant and diverse flora and fauna.



CLOUDED LEOPARD



GOLDEN LANGUR



BENGAL TIGER



Dehing Patkai becomes Assam's 7th National Park

Smt Sumathi Ramakrishnan

Dehing Patkai National Park (**234.26 sq. km**) became the **7th National Park of Assam**, one of the greenest states of India.

Dehing Patkai is a *deciduous rainforest interspersed with semi-evergreen and lush green flora*.

The national park includes areas falling within the existing *Dehing Patkai Wildlife Sanctuary* along with *Upper Dehing reserve forest* (West Block) and *Jeypore reserve forest*.



Short stretches of the **Dirak** and **Buri Dihing rivers** have been included in the park.

Till date, **47 mammal species**, **47 reptile species** and **310 butterfly species** have been recorded.

Rare fauna found in the region include *Chinese pangolin*, *flying fox*, *wild pig*, *sambar*, *barking deer*, *gaur*, *serow* and *Malayan giant squirrels* and several bird species including the endangered state bird, *the white-winged wood duck*.

Do You Know?

Dehing is the name of the river flowing through this forest and **Patkai** is the hill at the foot of which the national park lies.

*It is the only sanctuary in India with **seven different species of wild cats** – tiger, leopard, clouded leopard, leopard cat, golden cat, jungle cat and marbled cat.*



CAPPED LANGUR



MARbled CAT



BARKING DEER



TIGER

Do You Know?

Assam's other national parks:

1. **Kaziranga National Park** (UNESCO Natural World Heritage site - 1985)
2. **Dibru-Saikhowa National Park**
3. **Orang National Park**
4. **Manas National Park** (UNESCO Natural World Heritage site - 1985)
5. **Nameri National Park**



In May this year, our country witnessed an ugly spat between the Government of West Bengal and the Central Government.

This was over **Shri. Alapan Bandyopdhaya**, the Chief Secretary of West Bengal; rather unfortunate for an otherwise non-controversial and efficient officer to get embroiled in such a controversy.

He missed the meeting convened by the Prime Minister to review the damage caused by cyclone Yaas, during his visit to West Bengal.

This was a serious breach of protocol (system of rules), not expected of the highest civil servant of the state. Subsequently, the Centre asked him to report for **central deputation**, which the officer skipped.

This is not the first face-off between a State and the Centre over civil servants. Many have erupted in the past.

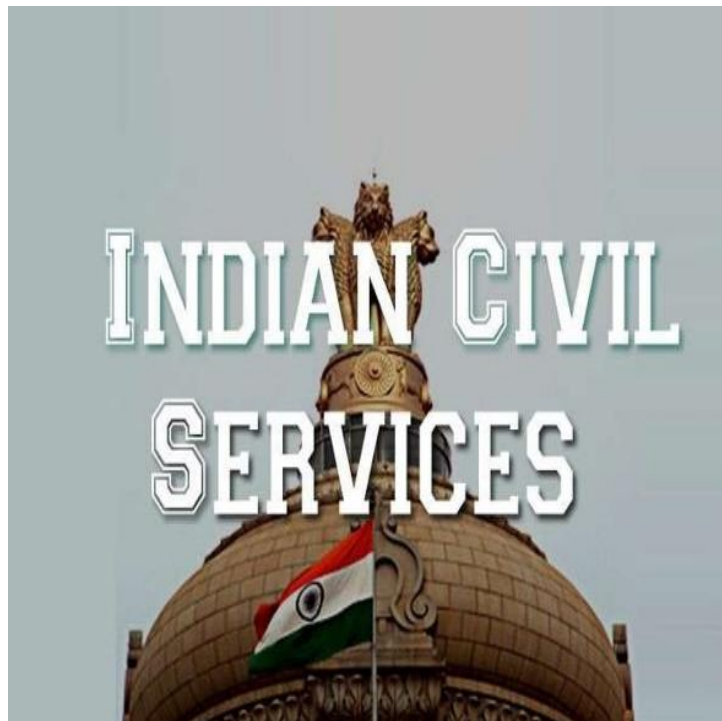
PROCEDURE AND ELIGIBILITY

Let us learn more about the appointment, postings, transfers and disciplinary proceedings governing the civil servants.

The Union Public Service Commission (**UPSC**) **selects the civil service officers** through a rigorous process. Once selected, the **President of India appoints them**, after which they are allocated state cadres.

The State Civil Services Board (CSB) is legally responsible for postings and transfers. But this is more on paper and in almost all the states it is the Chief Minister who has the final word on these postings.

Every year, the Centre asks for a list of IAS, IPS and IFS (Indian Forest Service) officers willing to go on central deputation. As per the IAS Cadre Rules, an officer may be deputed for service under the Central Government or another State Government, if jointly agreed by the two.



“In case of any disagreement, the matter shall be decided by the Central Government and the State Government(s) concerned shall give effect to the decision of the Central Government.”

Minimum Service with a State	Eligible rank at the Centre
7 years	Deputy Secretary
12 years	Director
16 years	Joint Secretary, Additional Secretary and Secretary

Officers (beginning) from the batch of 2007 will not be eligible for empanelment if they have not served under Union Government.

Central deputation can be for 7 years, after which an officer returns to the state cadre for three years called the cooling off period.

THE SELECTION PROCESS & LACUNAE

As per the procedure, the Establishment Officer of the Department of Personnel and Training (DoPT) invites nominations from the state governments.

Then a panel scrutinizes the eligibility and prepares an offer list. For an officer to be posted on central deputation, his or her concurrence is required. Normally, these are done with the state governments on board.

However, the rules are silent on some critical aspects. For example, if an officer does not comply with the central deputation order or if a state government does not relieve an officer, what is to be done is a grey area.

The Central Administrative Tribunal (CAT) is the forum for settling disputes on appointments, promotion and postings of civil servants.

DEPUTATION HONES SKILLS

This unsavoury episode has to a certain extent exposed the lack of propriety, non-adherence to norms, breach of protocols and the lack of political sagacity and statesmanship, also highlighting the need for a more rounded profile for officers. Mr. Bandyopadhyaya has hardly served outside select areas of West Bengal.

An officer who has served both at the Centre and the States would have had better exposure and navigation skills. Central deputation facilitates that.

It is important to keep the 'steel frame' of India corrosion free to maintain the foundations of our governance structure strong.

Do You Know?

Chief Secretaries - IAS officers who are the administrative head of **state** governments. They prepare the agenda for cabinet meetings and keep records of the same.



CURIOSITY corner

Ms Isha R

1. My twin lives at the reverse of my house number. The difference between our house numbers ends in two. What are the lowest possible numbers of our house numbers?
2. How can you write eleven thousand eleven hundred and eleven in numbers?
3. What can you put between 7 and 8 so that the result is greater than 7 but less than 8?
4. If $9999 = 4$, $8888 = 8$, $1816 = 6$, $1212 = 0$, then $1919 = ?$
5. Can you plug in either addition (+), subtraction (-), multiplication (*), division (/) and parenthesis among five 7's to make a target result number 50?
 $7 \quad 7 \quad 7 \quad 7 \quad 7 = 50$
6. You go to a doctor because you are ill and he prescribes you 3 pills and tells you to take them every half an hour. How long do the pills last?
7. Replace each letter for a unique digit so that the equation is correct.
 $(J + O + I + N + T)^3 = JOINT.$
8. You have been given a task of manually numbering a hundred-page document from 1 to 100. How many digits will you have to write altogether?
9. You are running a race with three persons. You overtake the second last position, what position are you in now?
10. What is the next number in the series? 7645, 5764, 4576, _____

ANSWERS 

Financial Literacy

The Power of Compounding

Smt Vanaja Shankar

Gita and Shravan showed off their colourful debit cards to their grandpa.

“My first bank account,” Gita beamed.

“I can’t wait to go shopping with my debit card.” Shravan’s eyes were wide with excitement.

“And I want to save, earn interest and make my money grow.” Gita replied.

“The interest is too low. How much can your money grow?” Shravan jeered.

Grandpa smiled. “I will tell you a story that shows the power of compounding.”

“There was a king in ancient India who was fond of board games. A mathematician introduced the game of chess to the King.

The king was so impressed by the game that he told the mathematician, “Ask for any reward and it shall be yours.”

The man responded, “Oh King. I need only rice for my living.

Give me one grain of rice for the first square of the chessboard, two grains for the next square, four for the next, eight for the next and so on for all 64 squares, with each square having double the number of grains as the square before.”

The King agreed, amazed that the man had asked for such a small reward - or so he thought.

After a week, his treasurer came back and informed him that the reward was astronomical – so much rice could not be produced in the kingdom – not even in the next century.”

“Grandpa, I too thought that the man was asking for a few grains. I don’t understand.”

“Look at this chessboard. In the first row, can you calculate the number of grains?”

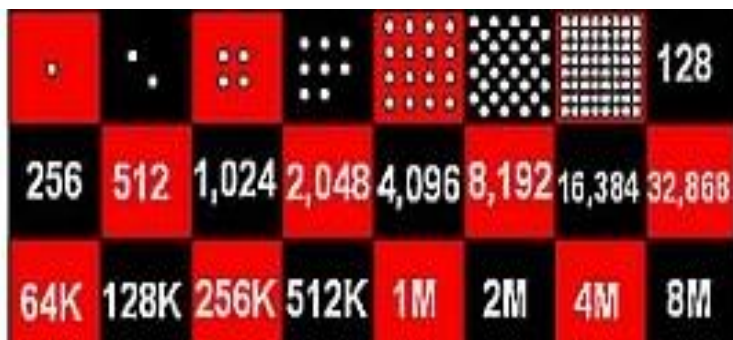


Gita and Shraavan counted. 1, 2, 4, 8, 16, 32, 64, 128. “Only 128 grains.”

Yes. Now check the next two rows.

“8 million” Shraavan and Gita exclaimed.

Yes. See what happens in the next two rows. This is the power of doubling.



1	2	4	8
256	512	1024	2048
65,536	1,31,072	2,62,144	5,24,288
1,67,77,216	3,35,54,432	6,71,08,864	13,42,17,728
4,29,49,67,296	8,58,99,34,592	17,17,98,69,184	34,35,97,38,368

16	32	64	128
4096	8192	16384	32768
10,48,576	20,97,152	41,94,304	83,88,608
26,84,35,456	53,68,70,912	1,07,37,41,824	2,14,74,83,648
68,71,94,76,736	1,37,43,89,53,472	2,74,87,79,06,944	5,49,75,58,13,888

And, finally on the sixty fourth square the king would have **18,000,000,000,000,000** grains of rice which is equal to about **210 billion tons** and is sufficient to cover the whole territory of India with a meter thick layer of rice.

“Wow. Then what happened?”

“There are different versions. Let us assume that the king was humbled and paid the mathematician a suitable reward.”

No Shortcut

“Wow, Grandpa, I want to double my money. I want to become a millionaire soon,” Shraavan was excited.

“Oh, don’t fall for that!” A gruff voice was heard. The three looked up to see Sharada, their fruit vendor at the door, with a basket of fruits for delivery.

“My mother gave twenty thousand rupees to our neighbour.

He promised to double it in six months, but in three months...” she sighed.

“You got fifty thousand, right?” Shraavan interrupted.

“No. He disappeared with all our money. We lost our 20,000.”

Grandpa asked Sharada. “Would you believe if someone told you that if you plant a sapling today, it will grow into a tree in six months and give you tons of fruits?”

“Of course not!” Sharada said.

“It is the same with money. There is no shortcut to success. You have to invest money and wait for a long period to get the reward.”

“Sharada you also sit with us. I will tell you how you can make your money grow.

Shraavan, can you repeat the story of the chessboard to us?”

Power of compounding

Grandpa continued. “What we learn from the chessboard and rice story is that in the beginning, like the first row, the amount that you save might seem low. The growth will also seem less. But if you start at a young age, save regularly, let your money earn interest on interest, the compounding effect will make your money grow to a huge sum in the long term.

Term deposits

When you commit to invest your money for a fixed period, the banks pay higher interest. These are called term deposits. The interest gets compounded every quarter.

Fixed deposit

If you deposit ₹ 10,000 for 2 years, say @ 6% p.a., you will get ₹11,264 at the end of 2 years.”

“Only ₹1200 interest?” Shravan seemed disappointed.

“Remember the first row in the chessboard? But if you invest the same for 10 years, you will get ₹18,140.”

“When will it double?”

“Rule of 72: This is a thumb rule – an easy way to know when your money will double.”

Years taken to double = 72 / rate of interest

In our case 72/6 = 12 years.”

Sharada was excited. “Sir, I would like to save for my daughter. She is two years old now. Whatever money is there at home or in my savings account, my husband spends it.

I will give you ₹500 every month. You keep it safe. When it adds up to ₹10,000, you help me start a fixed deposit.”

Grandpa smiled. “You can directly start a recurring deposit in the bank for ₹ 500 every month.”

“What is a recurring deposit Grandpa?” Gita asked.

Features of Recurring deposit

- ➔ **Scheme for saving fixed amount every month for a fixed period.**
 - **Eg. Rs.500/- every month for 12 months**
- ➔ **Interest rate as applicable to fixed deposits**
- ➔ **Period ranging from 6 months to 10 years**
- ➔ **Principal + interest repayable on maturity**

“For e.g. If you deposit ₹500 every month @ 6% p.a. for 2 years, you will get ₹12,775 at the end of two years. If you save ₹500 every month for 10 years, you will get a maturity value of ₹82,214.”

Sharada was happy. “Sir, I want to start this.”

“Good. The advantage is that your husband cannot withdraw from this deposit.

It is fixed in the bank for the period that you choose”.

“Suppose I need the money for an emergency?”

“The bank will **allow you to close prematurely but there will be a penalty** – a reduction in interest.”

“Grandpa, can we also open recurring deposit?” Gita asked.

“Yes, if you can save a fixed amount regularly every month. Some banks offer flexible recurring deposits where you can deposit as and when you get money.”

“I want to know how much I will get after one year.” Shravan asked.

“You can go to IBA (Indian Banks association) website or any bank website. You can find the calculator for maturity value on the sites.”

Reinvestment deposit plan

http://old.iba.org.in/reinvestment_maturity.asp

Recurring deposit

http://old.iba.org.in/recu_depo_matu.asp

“Grandpa, is there a scheme in the bank where we can get higher interest?” Shravan asked.

“There are special deposit schemes. Sharada, for your daughter, you can start a **“Sukanya Samriddhi Yojana.”** This is government’s special investment scheme for the girl child offering 7.6% p.a.”

“Gita and Shravan – this is your task. Read up about Sukanya Samriddhi Yojana and explain it to Sharada.”

Interest rate	7.60% p.a.
Investment Amount	Minimum - Rs.250, Maximum Rs.1.5 lakh p.a.
Maturity Amount	Depends on the invested amount
Maturity Period	21 years



Law in Focus

Constitutional law

Kum Deepasri

In the previous edition, we had discussed:

- Why it is important to know the law
- Ancient Indian legal system and sources of law
- Connections between early law and modern law

Now, we shall proceed to learn in detail about different branches of law.

One of the most basic and major branches of law is constitutional law. Constitutional law usually plays a role in several cases of national importance, even those which predominantly fall under other areas of law.

Thus, it is important to learn the fundamentals of the **Constitution of India** and the law pertaining to it.

THE CONSTITUTION OF INDIA: IN A NUTSHELL

The Constitution of India is the **‘supreme law of the land’** and is one of the most important legal documents in independent India. It was inaugurated on 26th January 1950 which became our Republic Day.

Some of the areas about which the Constitution prescribes rules are:

- Citizenship
- Fundamental rights and duties of citizens

- Directive Principles of state policy
- Procedure of functioning of the Parliament and State Legislative Assemblies
- Appointment and powers of important persons such as the President, Governors

HISTORY OF THE CONSTITUTION

The Constitution of India is not a document which was drafted overnight.

It was carefully conceptualised, debated and shaped over years.

(i) The Constituent Assembly

The Constituent Assembly, constituted in 1946, took **two years, eleven months and seventeen days** to be precise to complete its historic task of drafting the Constitution for Independent India.

The Constituent Assembly, included Dr. B R Ambedkar, Alladi Krishnaswami Aiyar, K M Munshi, T T Krishnamachari and Dr. Rajendra Prasad (President of the Constituent Assembly), among others.

On 29th August 1947, the Constituent Assembly set up a Drafting Committee under the chairpersonship of Ambedkar to prepare a Draft Constitution for India.



(ii) The Draft Constitution

The Draft Constitution was discussed in most Provincial Assemblies and then adopted by the Constituent Assembly.

While deliberating upon it, the Assembly moved, discussed and disposed of as many as **2,473 amendments out of a total of 7,635 tabled**.

Interestingly, the Socialist Party of India and the Hindu Mahasabha had prepared their own drafts of the Constitution and both of them were in agreement with the main features of the Constitution adopted by the Constituent Assembly.

(iii) The Final Document

The Constitution of India is a blend of idealism and realism. It is a **basis on which the people of India can work together and build the ideal independent India**.

The Constitution initially declared that India was a **sovereign democratic republic**.

Some of the other main features and principles to be noted are fundamental rights, directive principles of state policy, socialism, secularism and federalism.

While the Constitution of India was primarily based on our Dharmic civilisational values, it drew inspiration from the Constitutions/ legal systems of several other countries as well.

For example:

- ➔ Ideals of liberty, equality and fraternity in the Preamble- France
- ➔ Fundamental Rights- USA
- ➔ Directive Principles of State Policy- Ireland
- ➔ Fundamental Duties- USSR
- ➔ Parliamentary Government- UK

CONSTITUTIONAL LAW AND ITS FUNCTIONS

‘Constitutional law’ is the law relating to the provisions of the Constitution and the issues or disputes in connection with constitutional provisions.

Some of the many functions of constitutional law in practical application are:

1. Division of powers

The Constitution clearly distributes authority between the legislature (Parliament and State Legislative Assemblies), executive (the government and its officers) and the judiciary (courts of law).

The **legislature makes laws, the executive enforces and makes sure that the laws are followed and the judiciary decides cases of disputes** regarding the laws. This ensures that there is no clash among these organs and the law can be enforced effectively.

2. Protection of the rights and interests of citizens

This is one of the vital functions of constitutional law from the perspective of the common person. The Constitution has many provisions under which citizens can seek relief from a court when their rights are violated.

For example, **under Article 226** of the Constitution, **any citizen can file a writ petition before a High Court, if an action of the government or a public officer violates the ‘Fundamental Rights’** of the citizen or for any other reason.

3. Ensuring legal validity of laws passed by the Parliament

When an Act or a rule passed by the Legislature is violative of the fundamental rights or other provisions of the Constitution, it can be challenged before a court.

If the court finds that it goes against the constitutional principles, the Act or rule is declared as invalid.

CONCLUSION

This article has explained the importance of the Constitution of India, its history and the meaning and functions of constitutional law.

In the upcoming editions, we shall delve deeper into the various parts of the Constitution, in theory and in practice.

Do You Know?

Writ petition: An application filed before a court, requesting the court to issue a formal order.

26th January 1950 was also the twentieth anniversary of the day on which the Resolution on 'Purna Swaraj' was adopted.

The original version of the Constitution contains several illustrations and references of the Ramayana, reflecting the importance that the drafters accorded to Ramarajya and its ideals.

[We had discussed Ramarajya in the previous edition regarding legal jurisprudence in India.]



Rise and Shine, Rotifer!!!

Russia's Institute of Physicochemical and Biological Problems has discovered an organism known as a **bdelloid rotifer** which has been asleep for 24,000 years in the Siberian permafrost (Alayza River in the Russian Arctic).

What is a bdelloid rotifer?

Rotifers, commonly called wheel animalcules, are microscopic aquatic animals that can be found in many freshwater environments and in moist soil, where they inhabit the thin films of water around soil particles.

What is so special?

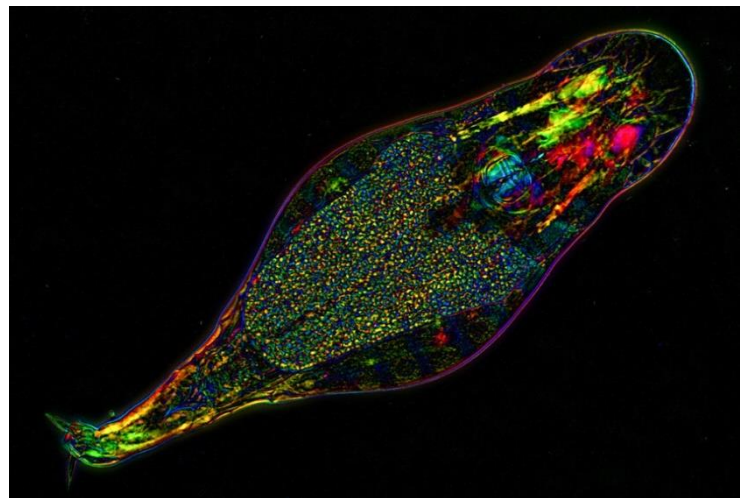
They are:

- ➔ multicellular invertebrates (no backbone).
- ➔ resistant to radiation.
- ➔ also capable of withstanding inhospitable environments such as starvation, low oxygen and even drying.

How are they able to do this?

They exhibit **cryptobiosis** -they survive harsh conditions by disabling all activity in their body-arresting their metabolism.

Smt S Nandhini



Once thawed, rotifers could reproduce asexually. Previous research said **they could survive frozen for up to 10 years.**

Research is on to see how the rotifer was able to achieve this unduly long period of cryptobiosis and yet spring back to life!

Do You Know?

Permafrost is any ground that remains completely frozen—32°F (0°C) or colder—for at least two years straight. Such grounds are most common in high mountainous regions and near the poles.



Know your Padma Awardees

Dr B M Hegde

Dr. Belle Monappa Hegde was born on 18th August 1938 in Pangala, near Udipi (Karnataka).

A cardiologist and a medical research scientist by profession, he is popularly known as '**people's doctor**'.

Dr. Hegde was the former Vice-Chancellor of the Manipal University and Emeritus International Advisor to the Royal College of Physicians of London and Edinburgh.

Currently, he is the Co-Chairman of TAG-VHS Diabetes Research Centre, Chennai and the Chairman of Bharatiya Vidya Bhavan, Mangalore.

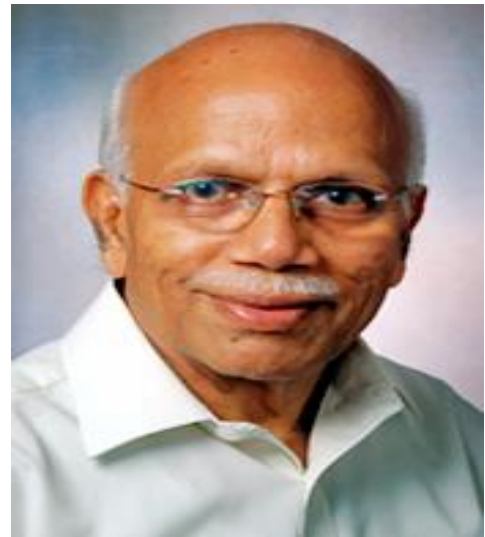
Apart from this, he also serves as a visiting faculty at many other universities in India and across the globe.

Many prestigious awards have been conferred upon him- the **Dr. B. C. Roy Award** (1999), the **Padma Bhushan** (2010) and the **Padma Vibhushan** (2021).

He has also authored several books in Kannada and English and is the chief editor of the *Journal of the Science of Healing Outcomes*.

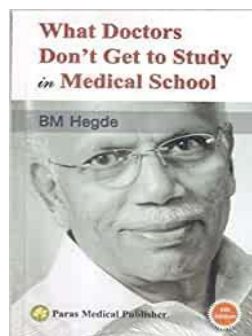
Hegde was the first Indian Examiner for the Members of the Royal Colleges of Physicians (MRCP) examination in the UK (1988).

Kum Vidhushi Pansari Student | Class XI



His research on the usage of **silver nanoparticles infused with water for curing malaria in just 3 days** was among the many papers published.

His popular speeches and books focus on holistic wellbeing, boosting natural immunity the interconnectedness of the body and mind, benefits of yogasana, meditation etc.



Also watch Dr. B. M. Hegde's video on 'Ayurveda v/s. Modern Medicine'

<https://www.youtube.com/watch?v=HzTvEKisVio>



Ahoms of Assam



Ahom Dynasty of Assam, was founded by Prince Chaolung Sukapha, who entered the Brahmaputra valley in 1228. He came from south China's Yunnan province from a town called Mong Mao Lung, with his 9000 companions. The Ahom dynasty ruled the Ahom kingdom in present-day Assam, India for nearly **598 years**.

Admirable Facets of its Administration

- ➔ The Ahom dynasty of Assam was not run in an autocratic fashion, with King being the sole authority.
- ➔ It was an inclusive government by the king with 5 ministers empowered to keep a check and ensure that the king delivered on his responsibilities.
- ➔ They also had the power to remove the king, if he was not doing his job.
- ➔ The Ahoms assimilated with the existing culture of the local people in many aspects and this is also a key reason of their prosperity.
- ➔ They accepted the culture, religion and language of the conquered people.
- ➔ The kings embraced Hinduism, or rather Shaivism and Shakti cult and built a lot of temples in Upper Assam.
- ➔ Ahoms displayed great respect towards all religion and a lot of families used to follow dual religious practices
- ➔ Ahoms encouraged inter cultural marriages and adaptation of cultural traits.



Role of Women

- ➔ Ahom queens (*Kunworis*) played important roles in the matter of state.
- ➔ They were officially designated in a gradation of positions, called the Bor Kuwori (Chief Queen), Parvatia Kuwori, Raidangia Kuwori, Tamuli Kuwori, etc. who were generally daughters of Ahom noblemen and high officials.
- ➔ Coins typically had the king's name and the queen's on the two sides.



A Hero of The Ahoms

The story of Ahom dynasty is incomplete without the story of **Lachit Borphukan**. He was one of the five Patra Mantris (minister) in the Ahom Kingdom and the ruler of Lower Assam.

From 1615 to 1682, the Mughals attacked North East 17 times.

King Chakradhwaj Singha selected Lachit Borphukan to retrieve Guwahati back from Mughals.

Being one of the greatest war generals, he galvanized his soldiers who fought fiercely and defeated the mammoth Mughal army.



Do You Know?

- The best graduating cadet of National Defense Academy is conferred the **LACHIT BORPHUKAN GOLD MEDAL** to commemorate the great warrior.
- 24th November is celebrated as **Lachit Diwas** in Assam.
- Assam comes from the word **ASSAMA** which means invincible which is the local name for **AHOM**.

Ahom Art and Architecture

The Ahom dynasty of Assam encouraged art and art forms including theatre. Scholars were given land grants.

The greatest contribution of the Ahoms to the culture of the Assam was the compiling of chronicles, which were first written in the Ahom language and later in both Ahom and Assamese. All important political events were recorded in the chronicles of Buranji.



KARENG GHAR



SIBSAGAR TEMPLE



Geographical Wonders of India

Smt Sumathi Ramakrishnan

Manikarna Hot Springs

Manikarana Hot springs located in the Parvati Valley on river Parvati, (**Kullu District of Himachal Pradesh**) is in the *Beas and Parvati valley geothermal system*.

At 1760 meters altitude, this small town attracts tourists and pilgrims visiting **Manali** and **Kullu**. An experimental geothermal energy plant is also present.

Many of the *colours in hot springs are caused by thermophilic* (heat-loving) **microorganisms** such as *cyanobacteria* and species of *archaea* and *algae*.

These grow in huge colonies called **mats** forming colourful scums and slimes on the sides of hot springs.

They derive their energy from various chemicals and metals; potential energy sources include *molecular hydrogen*, *dissolved sulphides*, *methane*, *iron*, *ammonia* and *arsenic*.



Colourful scums and slimes on the sides of the springs.

Do You Know?

In most hot springs, groundwater is heated by shallow intrusions of magma (molten rock) in **volcanic areas**. But in some, it is heated by **convective circulation**. Groundwater percolating downward reaches depths of a kilometer or more where the temperature is about 30 °C.

Hindu legend

Hindu temple at the banks of Manikarana hot springs



Legends say that when Parvati lost her earring in Manikarana, Shesh Nag (snake) disappeared into the earth with the earring. Angry that he could not find it, Shiva opened his third eye. This caused a catastrophe.

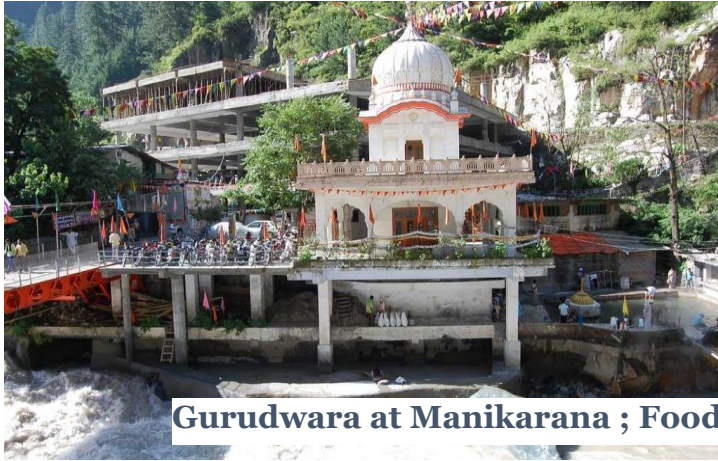
When beseeched by Parvathi, Shesh Nag, blessed them with a jet of water which turned boiling hot, throwing up precious stones along with Parvati's earring. It is believed that visiting Manikarana has even greater significance than Kashi.

Sikh legend

When Guru Nanak arrived at Manikarana with his disciple Mardana, they collected flour to make chapatis. Since there was no fire, he asked his disciple to upturn a stone and upon his doing so, a hot water spring arose.

Guru Nanak asked Mardana to roll out the rotis, pray to the lord and throw them into the stream. Disappearing initially, the rotis floated back fully cooked.

Hence, the place is sacred to the Sikhs too.



Manikaran hot springs are also known for their curing properties. Water is usable for cooking food. With religious, scientific, cultural, ethnic and diverse significance, Manikarana remains a wonder of Mother Nature.



Historical Wonders of India

Shri Krishnakumar C S

Hampi- A City lost in Invasions

UNESCO'S World Heritage Site, Hampi, customarily known as **Kishkinda-kshetra**, **Pampa-kshetra** or **Bhaskara-kshetra** comes from Pampa, an old name of the River Tungabhadra.

Hampi, the capital of the **Vijayanagara Empire** during the 14th century AD transformed into the world's second-largest and one of India's richest cities. It was built with the abundantly available granite rock stones. **Incessant invasions by the Mughals converted it to a land of ruins.**



The Virupaksha Temple

The ruins, spread across over 41 sq. km, consist of more than **1600 surviving structures** including temples, forts, mandapas, shrines, pillared halls, sacred and royal complexes, water structures and more which showcase exquisite architecture.

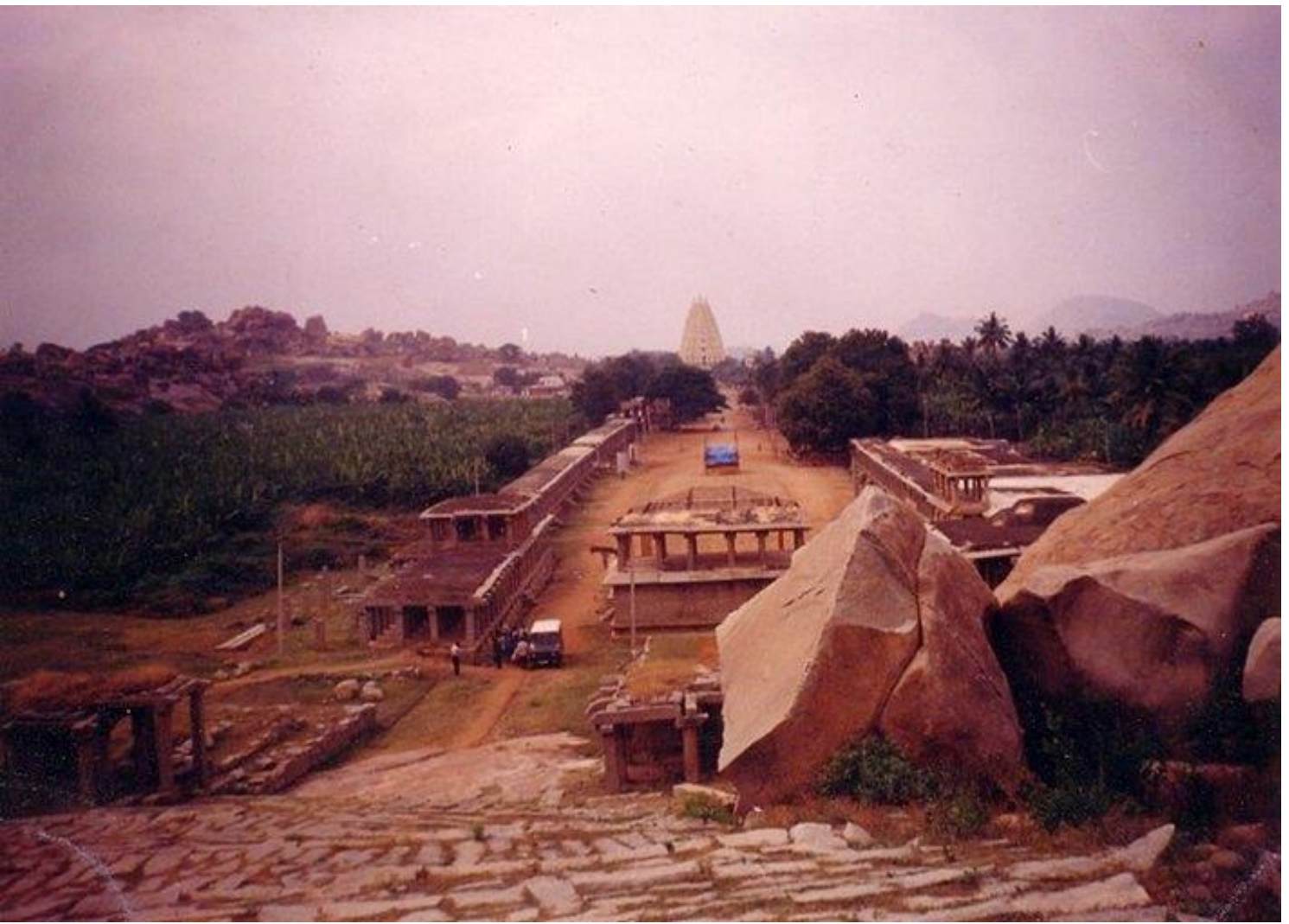
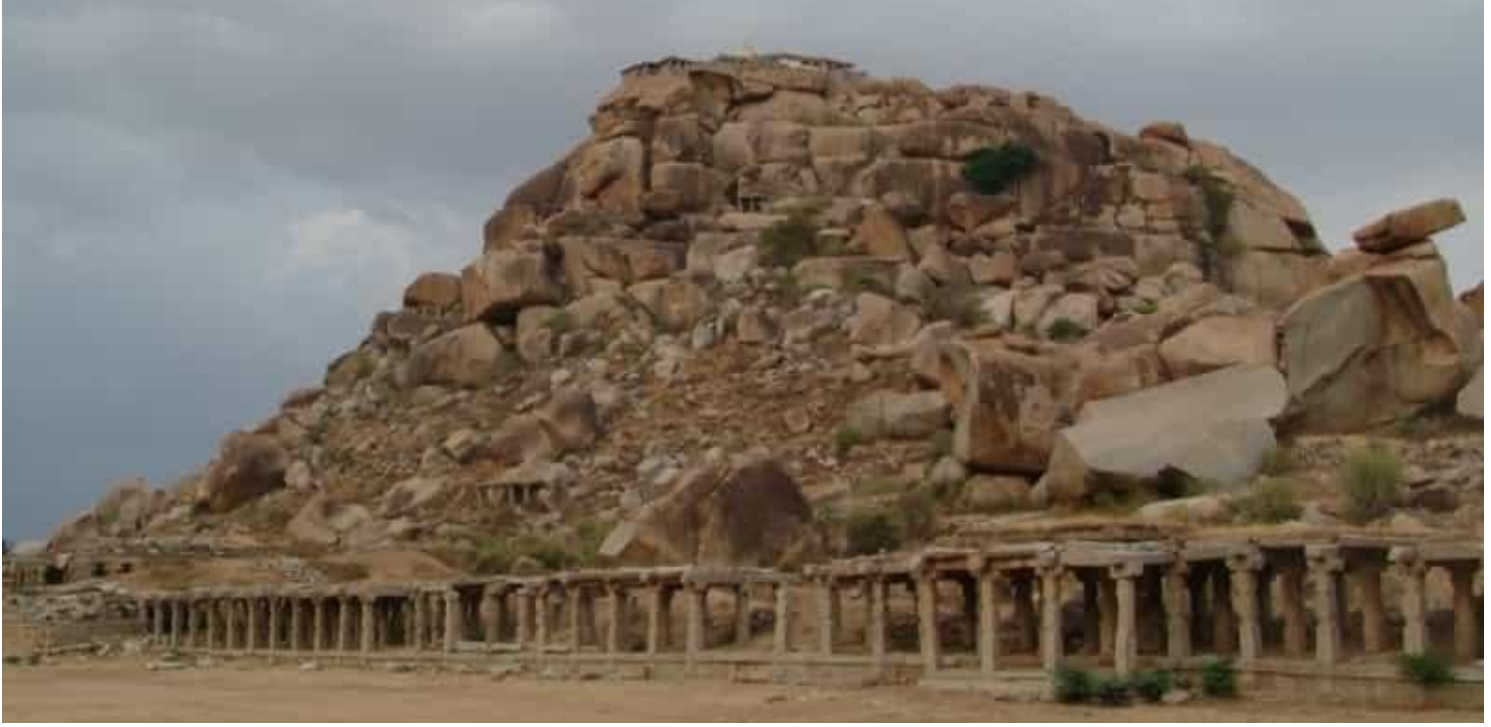
Hampi also has religious significance as it houses the famous Virupaksha Temple, Achyuta Raya Temple, Vittala Temple and a monastery linked to Adi-Shankara.



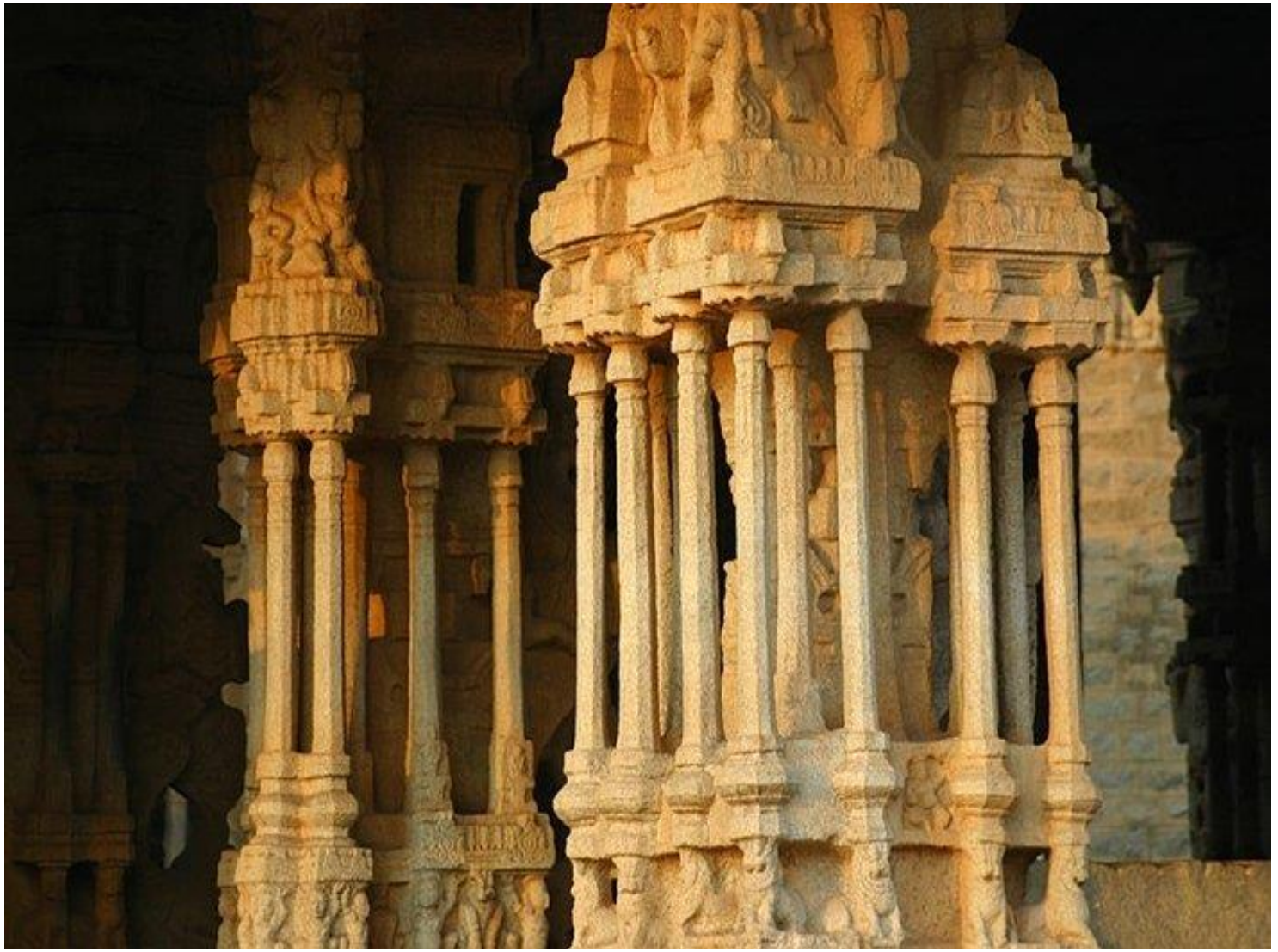
This royal enclosure where the royalty lived is spread over 59,000 sq.m



The outer walls of Hazara Rama Temple, carved and ornamented with the antique objects narrate the Ramayana. The fossils and antique objects present in this temple are the rarest in India.

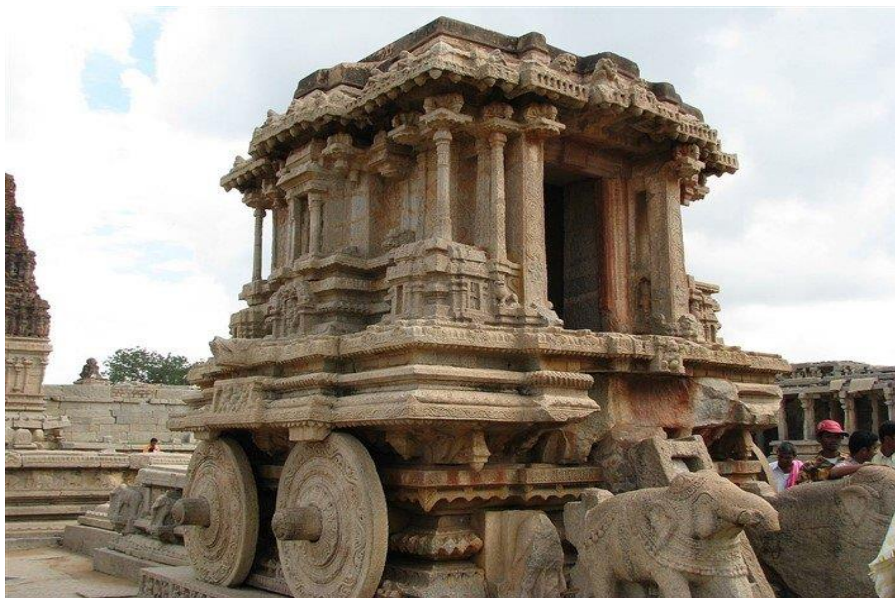


Hampi / Virupaksha Bazaar located close to the Virupaksha was once a flourishing marketplace.



56 musical stone (Saregama) pillars in Vittala Temple create melodic sounds when tapped delicately.

The Archaeological Museum situated near Hosapete town exhibits numerous relics.



Do You Know?

The artists of those times used an interesting tactic to cut these gigantic stones and changed them into wonderful pieces of art.

When a rock was cut, holes were made on the stone's surface, and dry wooden pieces pegged into them.

Water was poured over the pegs, which when completely soaked, their size expands, causing the stone to split due to the mounting pressure inside.



LAKSHADWEEP ISLANDS



It was Balu’s birthday, his mother had prepared a luscious dessert, which he had never tasted before.

Dadu: Happy Birthday Balu and here is your treat! God bless you

Balu: [Delighted] Thank you Dadu.....and what is it? [puzzled] I have never seen a sweet wrapped in a banana leaf with a string around it.

Let me taste it first.....[As the dessert melted in his mouth, he relished it..] mm...yummy!!

Dadu, I get the flavour of jaggery and coconut.

Dadu: Perfect! This dessert is called Dweep Halwa... one of the traditional dishes of a place named ‘a hundred thousand islands’. Can you guess?

Balu: [Guessing] is it Lakshadweep? [unsure]

Dadu: Spot on! But, why so doubtful ? [With a serious look] It's time to learn more about India.

Balu: [Thrilled] Yes!!!Dadu, tell me more about this place.

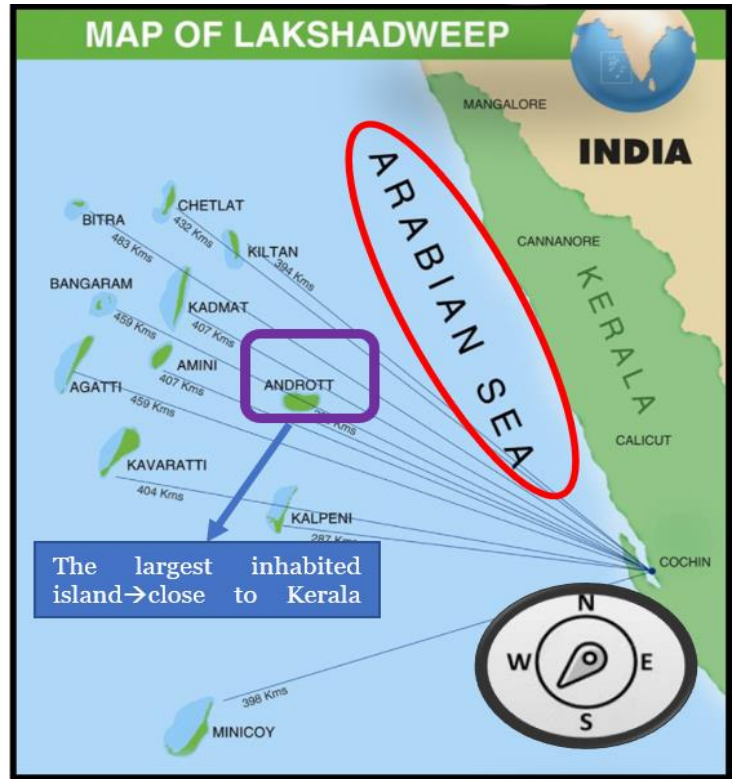
Dadu: Lakshadweep is a group of 36 islands located 200 to 440 kilometres off the southwestern coast of India.

Out of 36 only 10 islands are inhabited.

There are **three island groups – Amindivi, Laccadive and Minicoy group of islands.**

Balu: Amazing! Are there any interesting stories, Dadu?

Dadu: Yes!! During the Medieval period, the Cholas ruled the islands. Then, the islands played an important role in the Indian Ocean trade.The Portuguese conquered and controlled during the 16th century. In the late 18th century, Tipu Sultan took control of the islands but was defeated during the third Anglo-Mysore war and later conquered by the British.



The earlier name of these islands was Laccadive Islands.

In 1956, it became an Indian Union Territory, and in 1973, it was renamed Lakshadweep Islands.

Balu:[Curiously] What do they do for a living Dadu?

Dadu: Apart from tourism, agriculture, fishing and coconut production (major crop) are the mainstays of the economy. Lakshadweep stands first in coconut production. Other crops such as jowar, ragi, sweet potatoes, sorghum and banana are also cultivated here.

Balu: OK. Are there any industries?

Dadu: Yes! This region's thriving industries are coir manufacturing, tuna canning and marketing and boat building. Look at some of the famous art and crafts of this place.

Balu: [Delightedly] Lovely!! Dadu, another must see vacation spot after the lockdown!!



Dance-forms



Kolkali




Lava



Parichakali




Oppana

 **Area-** 32 Sq Km


 **Population-** 65,473


 **Capital-** Kavaratti


 **Principal languages-** Malyalam, Jeseri (dweep bhasha) and Mahl (Dhivehi)
No. of districts- 1


 **Lok Sabha Seats:** 01


 **Literacy Rate:** 91.85 %


 **Rajya Sabha Seats:** Nil


 **Created on:** 1 November 1956


 **Religion:** Islam (96.58%), Hinduism(2.77%), Christianity(0.49%), Buddhism(0.02%), Jainism(0.02%), Sikhism(0.01%), Other or irreligious (0.11%)

 **Ethnic groups:**83% Malayali,17% Mahls

 **Fish:** Butterfly fish (Chaetodon falcula)

 **Tree:** Bread fruit (Artocarpus incisa)

 **Bird:** Brown noddy (Anous stolidus)

 **Festivals:** Bakrid, Id-Ul-Fitr, Muharram, and Milad-Un-Nabi

 **First Administrator:**UR.Panicker

Crafts



Shell-craft



Coconut shell-craft



Tortoise shell-craft

Places to Visit



Bangaram Atoll



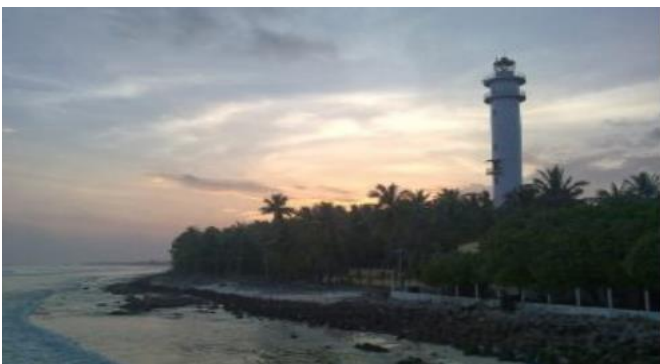
Agatti Island



Kadamat Island



Minicoy Island



Kalpeni Island



Kavaratti Island



The Preamble

Placed in a special helium-filled case in the Indian Parliament Library, we find the pages of the handcrafted **Indian Constitution** bound in black leather, embossed with patterns in gold. It defines not just the laws of the country, but also its authors who were proud of Indian history and heritage.

One of the longest written constitutions for any sovereign state in the world, each of its 22 parts begins with an illustration.

Let us understand our constitution in detail starting with the Preamble.

A preamble is an introductory statement in a document that explains the document's philosophy and objectives.

In a constitution, it presents the intention of its framers, the history behind its creation, and the core values and principles of the nation.

The Preamble is neither enforceable nor justifiable in a court of law. This implies that courts cannot pass orders to the government to implement the ideals in the Preamble.

It begins with the words “**We the people of India...**” thus clearly indicating it is the people of India on whose authority the Constitution rests.

It emphasizes the sovereignty of the people that all powers of government flow from the people.

These words declare in unambiguous terms that the Constitution has been adopted, enacted and given to themselves by the people of India.

Do You Know?

- ➔ The Preamble was enacted after the enactment of the entire Constitution of India.
- ➔ Preamble can be amended and it has been amended only once through the **42nd Constitutional Amendment Act 1976**. The terms ‘**Socialist**’, ‘**Secular**’ and ‘**Integrity**’ were added to it.

Four Main Components of the Indian Preamble

Source of the Indian Constitution

The People of India are revealed to be the source of the authority of the Indian Constitution. The words, ‘We, the People of India’ reflect the same.

Nature of the Indian State

The Preamble of India tags India as the sovereign, secular, republic, secular and democratic nation

Objective of the Indian Constitution

Justice, Liberty, Equality and Fraternity are denoted as the objectives of the Preamble of India

Adoption

November 26, 1949 as the date when then the Indian Constitution was adopted.

KEY WORDS IN THE PREAMBLE

Sovereign

India has its own independent authority and it is not dominated by any other external power

Socialist

Achievement of socialist ends through democratic means. It holds faith in a mixed economy where both private and public sectors co-exist side by side.

Secular

All the religions in India get equal respect, protection and support from the state.

Democratic

An established form of Constitution which gets its authority from the will of the people expressed in an election.

Republic

The term indicates that the head of the state is elected by the people. In India, the President of India is the elected head of the state.

Equality

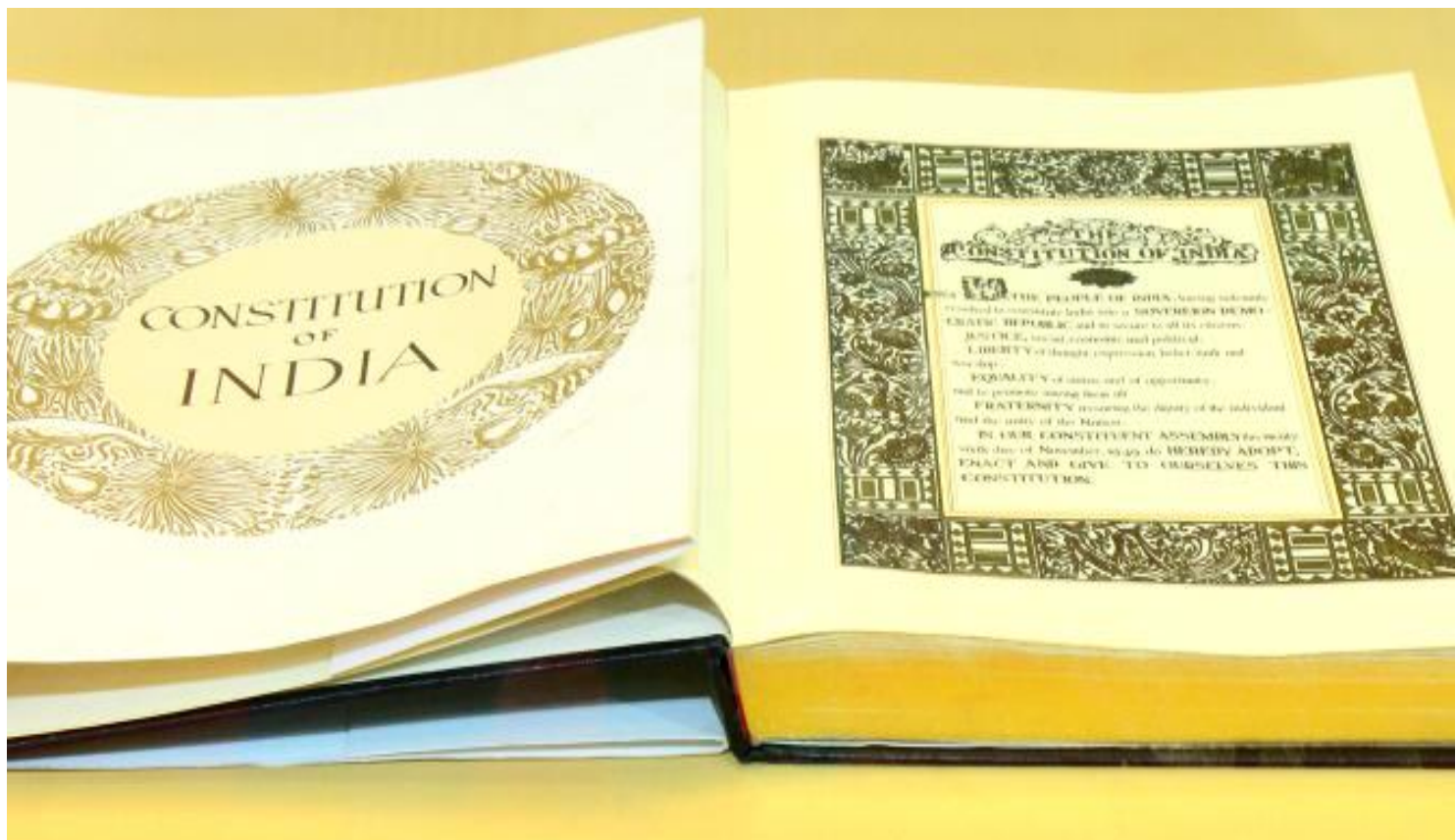
No section of society has any special privileges and all the people have given equal opportunities without any discriminations. Everyone is equal before the law.

Liberty

People's freedom to choose their way of life, have political views and behaviour in society but in the limit set by the law.

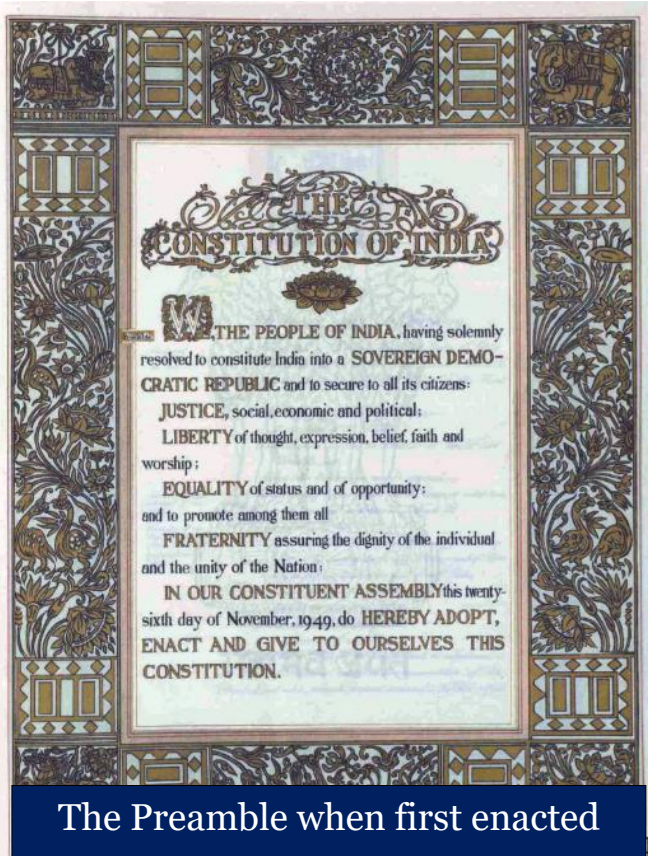
Fraternity

A feeling of brotherhood and an emotional attachment with the country and all the people to promote dignity and unity in the nation.

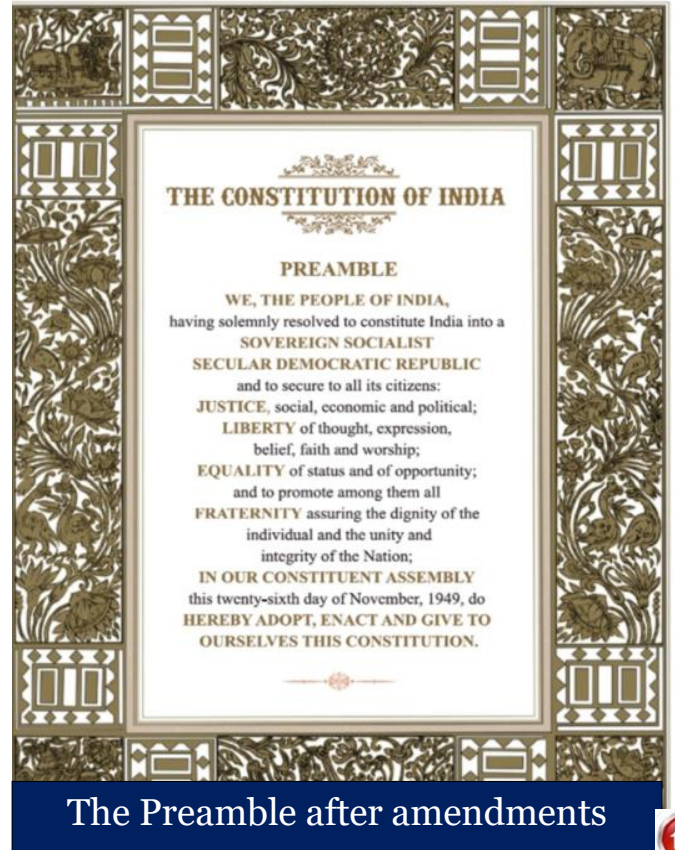


Illustrations and Calligraphy in the Indian Constitution

- The Preamble page has intricate patterns sketched by **Beohar Rammanohar Sinha** (his signature included) and the national emblem sketched by **Dinanath Bhargava**. Rendered largely in miniature style, there are **influences of Ajanta cave paintings and the Bagh murals** in its borders and illustrations.
- Each word was carefully calligraphed by **Prem Behari Narain Raizada** and the illustrations were done by artist **Nandalal Bose** and his team from Shantiniketan.
- Chronologically, it charts the history of India, from Mohenjo Daro to the National Freedom struggle.



The Preamble when first enacted



The Preamble after amendments



The Unsung Heroes

Kum Jananii M | Student (IX)

The Lady who helped Bhagat Singh

Durga Devi was one of the few women who actively participated in armed revolution against British Raj, working with revolutionaries like **Bhagat Singh**, **Sukhdev Thapar** and **Chandrashekhar Azad**.

After Saunders killing, Bhagat Singh **disguised** himself by cutting his hair short and dressing in western attire. To complete the disguise he needed **Durga Devi to pose as his wife**. She readily agreed and they escaped from Lahore police. Wonder if Bhagat Singh would have **lived to achieve his next feat if not for Durga Devi**.





Since she was the wife of another HSRA member, **Professor Bhagwati Charan Vohra**, all revolutionaries of HSRA referred to her as '**Bhabhi**'.

She was an active member of the Naujawan Bharat Sabha which became famous when it decided to observe the 11th anniversary of **Kartar Singh Sarabha's** martyrdom in 1926 at Lahore.

As revenge for the hanging of Bhagat Singh and others, Durga attempted to kill Lord Hailey, an ex-Governor of Punjab.

Durga was arrested and awarded three years imprisonment.

Living as a common citizen in Ghaziabad she went on to open a school for poor children in Lucknow, which is now known as the **City Montessori School**.

She also donated her land for **Shaheed Sodh Sansthan**. She died on **15th October 1999** at the age of 92.

Her bravery and contribution to freedom struggle and independent India deserve respect.



Durga Bhabhi memorial



1. The lowest possible numbers are **19** and **91**.
The difference is **72**.

2. $11000 + 1100 + 11 = 12111$

3. A **decimal** because 7.8 is greater than 7, but less than 8.

4. Two (**2**)

9999 has four closed areas (top of 9)

8888 has $(4 \times 2 = 8)$ closed areas

1212 has no closed areas

1919 has **two** closed areas.

5. $((7 \times 7 \times 7) + 7) / 7 = 50$ (or)

$((7/7) / 7 + 7) \times 7 = 50$

6. an hour.

7. $(1 + 9 + 6 + 8 + 3)^3 = 19683$

8. 192

Pages 1 to 9 = 9 digits

Pages 10 to 99 = $90 \times 2 = 180$ digits

Page 100 = 3 digits.

9. Third position. The total number of people running in the race is four and you passed the second last person (third person). So, you are in the third position.

10. 6457 because the last number is moved to the front to make the number in the next series.

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