



# PrAjya

A MONTHLY NEWSLETTER



Dear Students,

**JANUARY 2021 EDITION**

**न चोरहार्यं न च राजहार्यं न भ्रातृभाज्यं न च भारकारि  
व्यये कृते वर्धत एव नित्यं विद्याधनं सर्वधनात्प्रधानम्**

*Na chora haaryam, na ch raja haaryam, na bhaatra bhaajyam, na cha bharaakari  
Vyayam krute vardhat evam nityam, vidhyadhanam sarvadhana pradhanam*

In essence, this sloka means: Knowledge is that which cannot be stolen by thieves, cannot be taken away by kings/authority (as taxes etc.) and cannot be divided among brothers (as family property); it is not a burden (to the one who has it) and increases on sharing; it is the supreme wealth among all types of wealth.

There's immense joy when we share knowledge with youngsters. However, there's also an interesting challenge of encapsulation with so many branches of knowledge and a diverse age group to cater to. Matters of topical interest do take precedence but we also help them travel across time frames to discover and appreciate the rich heritage.

This issue carries red hot issues like the mutating Coronavirus and the new farm laws; recent additions to the arsenal of India's defence forces and the skyrocketing achievements of ISRO; insights into the life of celebrated and little-known heroes; interesting facts about places with historical signatures and also emerging structures; bilateral agreements and a lot more to gratify a range of interests.

We look forward to your support and suggestions.

Editorial Team

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### FARM LAWS: FACTS

Assurances by the Government to the farmers

- MSP policy will continue.
- Contract farming is optional.
- Mandi Markets will continue.

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### NEW ABODE FOR THE SOUL OF DEMOCRACY

Prime Minister Shri. Narendra Modi performed the ground-breaking ceremony to mark the symbolic launch of the new parliament building on 10<sup>th</sup> December 2020.

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### CMS-01

There are different types of satellites like Communication Satellites, Earth Observation Satellites, Navigation Satellites, scientific Exploration satellites, experimental satellites, small satellites etc.

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### KNOW YOUR CONSTITUTION THE LOK SABHA

17 General Elections to the Lok Sabha have been held till date.  
Leader of the opposition - currently vacant.

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### B.1.1.7 (COVID-19)

Owing to travellers from the U.K. a small number of cases were detected in India, Australia, Canada, Denmark, France, Germany, Italy, the Netherlands and possibly US.

[Read More ⇨](#)

### IAF TEST FIRES AIR DEFENCE MISSILES

The Indian Air Force (IAF) carried out a massive exercise to test its air defence missiles including the indigenous AKASH air defence system and the *Igla* handheld launchers.

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### PM's VIRTUAL BILATERAL MEETING

PM Modi holds virtual summit with Sheikh Hasina and calls Bangladesh a significant pillar of India's 'Neighbourhood First' policy.

[Read More ⇨](#)

### CHENNAI TO BECOME SE ASIA'S DATA CENTRE HUB

The Adani Group will invest ₹2,500 crores to set up a 'hyperscale' data centre (DC) in Chennai, called Adani Chennai-1 and will boost the city's attempts to become the country's major DC hub.

[Read More ⇨](#)

### ARAKU VALLEY-OOTY OF ANDHRA PRADESH

Nestled in the lap of lush forests in the Eastern Ghats, 144 km from Visakhapatnam, is a pristine hill station about 911km above sea level, called the Araku Valley.

[Read More ⇨](#)

### KNOW YOUR NATION - ASSAM

Situated south of the eastern Himalayas along the Brahmaputra and Barak River valleys, Assam is known for its rich and diverse wildlife, vibrant dance forms and hospitality.

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### REMEMBERING RAMANUJAN

The intuitive mathematical genius Ramanujan's discoveries have influenced several areas of mathematics. He is most famous for his contributions to number theory and infinite series.

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### INDIAN NAVAL MIGHT

India has embarked on building diesel-electric Scorpene submarines in collaboration with French naval defence and energy group.

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# FARM LAWS: FACTS

**Protests seeking withdrawal of the Farm laws continue to rock New Delhi.**

## BACKGROUND

- Under the APMC Act passed in 2003 State Governments were asked to set up Agricultural Produce Market Committees (APMC) to help farmers market their products.
- Registered farmers can sell their produce in APMC controlled markets (Mandis) through an auction.
- Gradually commission agents formed cartels and forced farmers to sell their products at Minimum Support Price (MSP). Farmers had to pay Mandi Tax to State Governments and also commission to agents.
- Farmers could not sell outside the Mandi even if market price was higher than the MSP.
- Facing huge losses, many farmers gave up farming.

## What do the protesters fear?

- The Government may scrap MSP policy and abolish Mandis
- Corporates may take over the agricultural sector

## Assurances by the Government

- MSP policy will continue.
- Contract farming is optional. The farmer alone decides.
- Mandi Markets will continue.

## The Minimum Support Price (MSP)

GOI announces a minimum price for 23 commodities twice a year. If the market price is lower than MSP, it will buy directly from the farmer at MSP.

MSP is fixed on the recommendations of the Commission for Agricultural Costs and Prices (CACP) since 2009.



## THE NEW AGRICULTURAL ACTS

### Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020.

As per this, farmers can:

- decide whom to sell to.
- sell outside the Mandi if they expect higher returns. For e.g., a Punjab farmer can sell products directly to a Tamilnadu trader.
- even make use of online selling platforms.
- be safe from exploitation by middlemen.

### Farmers (Empowerment and Protection)

#### Agreement on Price Assurance and Farm Services Act, 2020.

- It legalizes contract farming.
- Farmers can tie up with private agricultural companies.
- Farmers can get HYV (high yield variety) seeds, fertilisers, financial capital, etc. from the company.
- The company will give fixed prices for farm products. Market fluctuations will not affect the farmers.

### Essential Commodities (Amendment) Act, 2020

- This amendment to the existing Essential Commodities Act removes restrictions on the domestic sale and export of farm products except in times of crisis.
- The farmers and agricultural companies get the right to store their products and sell when the market price is high.



# NEW ABODE FOR THE SOUL OF DEMOCRACY



Prime Minister Shri. Narendra Modi performed the ground-breaking ceremony in the heart of Delhi to mark the symbolic launch of the new parliament building on 10<sup>th</sup> December 2020.

The new Parliament building will be constructed close to the existing one under the Central Vista redevelopment project.



## Evolution of Indian Parliament Building

(a) The Imperial Legislative Council formed in 1861 after the British takeover of Indian administration in 1858 held its meetings at Government House, Calcutta. Till 1911, Calcutta was the capital city of India.

(b) After the capital got shifted to Delhi, the Old Secretariat Building became the meeting place of the Legislative Council (1912 to 1926).

(c) A bicameral legislature was formed under the Montagu-Chelmsford Reforms of 1918. The number of members in the legislative assembly increased to 140. It was decided to remodel an existing building to accommodate the legislative assembly.

(d) Delhi's architects Herbert Baker and Edwin Lutyens suggested the construction of a permanent building to house the legislature. Lutyens suggested a circular, colosseum design. The construction which started in 1921 was completed in 1927.

(e) Inaugurated on 18<sup>th</sup> January 1927 by Lord Irwin, Viceroy of India, the building later housed the Constituent Assembly and the Indian Parliament.

## The need for a new Parliament building

With the increase in the number of members and their responsibilities, the Parliament space became insufficient. MPs don't have office space and often meet visitors in the parliament canteen or at their residence.

Modern technology, air-conditioning, live TV, connected computers have all played havoc with the interiors of the 90-year-old building which started "weeping" and showing "signs of distress".

The attic of the building can only be accessed by elevators and a narrow staircase, which presents a risk for staff and MPs working in that area.

The new Parliament building will solve these issues and provide adequate facilities to the members of the Parliament.

## SALIENT FEATURES OF THE NEW PARLIAMENT BUILDING

- ☀ It is a four-storey structure ☀ A Grand Constitution Hall to exhibit India's democratic heritage
- ☀ Lounge for MPs and Library ☀ Multiple Committee Rooms ☀ Dining Area

☀ **TOTAL AREA:** 64500 sq.m. ☀ **SEATING CAPACITY:** 1224 MPs

☀ **COST:** Rs. 970 Crores ☀ **ESTIMATED COMPLETION:** 2022 ☀ **CONSTRUCTION COMPANY:** Tata Projects Limited



<http://delhiassembly.nic.in/> for more details





## KNOW OUR PADMA AWARDEES

In this edition, we would like to introduce you to the renowned Sanskrit scholar **Vidyavachaspati Bannanje Govindacharya** (August 3, 1936-December 13, 2020).

### Early Childhood & Education

Govindacharya was born in the Bannanje neighbourhood of Udipi, Karnataka. He started his Vedic studies under his father, Tarkakesari S. Narayanacharya and went on to study under Vidyamanya Tirtha Swamiji of the Palimaru Matha and Vidyasamudra Tirtha Swamiji of the Kaneyur Matha, both in Udupi.



**Vidyavachaspati  
Bannanje Govindacharya**

He also studied Vedic scriptures under the late seer, Vishweshwara Tirtha of the Pejawara Matha.

### Illustrious Career

Govindacharya was well-versed in Veda Bhashya, Upanishad Bhashya, Mahabharata, Ramayana and the Puranas. He wrote extensively on the Upanishads. His commentaries on Veda Suktas, Shata Rudriya, Brahmasutra Bhashya and Gita Bhashya are well-known and highly acclaimed in the spiritual arena. He also wrote on new Vyakarana Sutras penned by ancient Sanskrit philologist Daksiputra Panini.

Govindacharya authored nearly 150 books and has nearly 4,000 pages of Sanskrit "vyakhayana" (commentary) to his name. He translated several texts from Sanskrit to Kannada. Some of them are Bana Bhatta's novel 'Bana Bhattana Kadambari', Kalidasa's 'Shakuntala' and Shudraka's 'Mrichakatika.' Govindacharya had also translated several historical novels to Kannada.

### Eloquent Speaker

Bannanje was also a great orator. He presented a number of "pravachanas" (discourses) on varied topics in different parts of the country and abroad. His commentaries on Vishnu Sahasranama are well known. With his strong command over English, he was able to reach out to people abroad and make them understand the essence of the Bhagavad Gita and other great Sanskrit works through a series of lectures. With his in-depth knowledge of ancient literature, he was able to speak authoritatively on Dwaita, Advaita, Vishishtadvaita, Jainism, Buddhism, Sikhism, Christianity and Islam.

### Unfinished Work

Mr. Govindacharya was writing interpretative essays on each sloka of the 18 chapters of the Bhagavad Gita in Kannada invoking the doctrines promulgated by Shankaracharya, Ramanujacharya and Madhwacharya. He had completed eight of the chapters, but with his demise the work has come to a standstill.

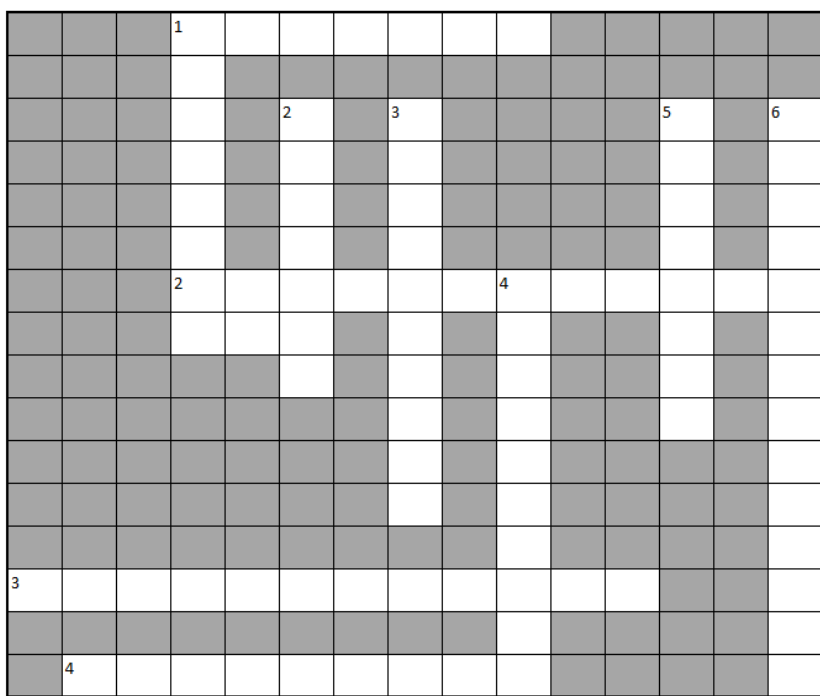
### Honours & Citations

Govindacharya was the brand ambassador of India in World Conference on Religion and Peace held in Princeton, USA in 1979. He was conferred the Sahitya Akademi's award for translation in 2001. He was also the recipient of the state award for meritorious service and scholarship in Vedic Literature and Philosophy by the Karnataka Government. He served as the editor of the prestigious Kannada daily, Udayavani.

As a mark of respect to his scholarly pursuit and profound erudition, he was conferred the prestigious Padma Shri award in the year 2009.



Here is a crossword puzzle to enhance your vocabulary.  
**All the best!**



#### ACROSS:

1. A person who renounces this world to attain salvation
2. One who talks in sleep
3. A person who is capable of using both hands equally well
4. A person who readily believes others

#### DOWN:

1. A person who works for the welfare of others
2. One who is connoisseur of good food
3. A person who is hard to please
4. One who eats food of both plant and animal origin
5. One who can be easily duped or cheated
6. One who is over anxious about his health



## UNHAILED HEROES



Born in Rangoon in 1927, Myanmar, **Saraswathi Rajamani** was the **YOUNGEST SPY** to work for the Indian National Army founded by Subash Chandra Bose.

She was born in a wealthy family that supported the independence movement and her father was actively involved in anti-British activities. Soon the family moved and settled down in Rangoon, Myanmar when she was very young.

Young Rajamani was greatly inspired by the Indian National Army founded by Netaji Bose and his clarion call to drive out the British from India. She donated her gold and diamond jewellery to support the efforts of Netaji.

While Netaji chose to return her jewels, she refused to take them back. Impressed by her steely resolve and aggressive patriotism, Netaji gave her the name **Saraswathi**.

She and four of her friends were inducted into the Rani of Jhansi regiment of the INA as covert spies. When one of her friends was caught by the British, she rescued her, disguised as a dancer. As they were escaping, Rajamani was shot in her leg. But that did not stop her from saving her friend.

After independence, Saraswathi Rajamani returned to India with her family. They had donated all their property and wealth for the freedom of our nation. She spent the final years of her life in Chennai and continued to serve others in whatever way she could until her demise in 2018.

Our nation thrives because of the selfless sacrifice of such brave hearts!!

**Let's salute the gallant Saraswathi Rajamani!!!**



# CMS 01-THE LATEST MISSION OF ISRO

Bhāratīya Antarīkṣ Anusandhān Saṅgathan



ISRO logo (adopted in 2002)

## Agency overview

<b>Abbreviation</b>	ISRO
<b>Formed</b>	15 August 1969; 51 years ago
<b>Preceding agency</b>	INCOSPAR
<b>Type</b>	Space agency
<b>Headquarters</b>	Bangalore, Karnataka, India 12°57′56″N 77°41′53″E
<b>Chairman</b>	Kailasavadivoo Sivan (ex-officio)
<b>Primary spaceports</b>	Satish Dhawan Space Centre (SDSC/SHAR), Sriharikota · Thumba Equatorial Rocket Launching Station (TERLS), Thiruvananthapuram · Kulasekharapatnam, proposed
<b>Owner</b>	Department of Space
<b>Employees</b>	17,222 as of 2020 <sup>l</sup>
<b>Annual budget</b>	₹13,479.47 crore (US\$1.9 billion) (FY20) (Ranked 7th)
<b>Website</b>	www.isro.gov.in

Doing everything online be it classroom learning, shopping, placing orders or booking a cab etc. has become the new normal. All the voluminous data can be handled successfully only through artificial satellites.

## SATELLITES AND THEIR TYPES

A satellite is a moon, planet or machine that orbits a planet or star. For example, Earth is a satellite orbiting the sun. Satellite, a machine launched into space moves around Earth or another body in space. There are different types - Communication Satellites, Earth Observation Satellites, Navigation Satellites, scientific Exploration satellites, experimental satellites, small satellites etc.

ISRO (Indian Space Research Organization) has successfully launched all of them.

## COMMUNICATION SATELLITES

The Indian National Satellite (INSAT) system is one of the largest domestic communication satellite systems in the Asia-Pacific region with nine operational communication satellites placed in Geo-stationary orbit. Established in 1983 with the commissioning of INSAT-1B, it initiated a major revolution in India's communications sector and sustained the same later.

Currently operational communication satellites are INSAT-3A, INSAT-3C, INSAT-3E, INSAT-4A, INSAT-4B, INSAT-4CR, GSAT-8, GSAT-10 and GSAT-12. With more than 200 transponders in the C, Extended C and Ku-bands, INSAT system provides services to telecommunication, television broadcasting, satellite newsgathering, societal applications, weather forecasting, disaster warning and Search & Rescue operations.

## What's in a name?

ISRO follows a generic code in naming its communication satellites.

The acronym CMS stands for **Communication Satellite**, and the O1 tagged to it is the serial number.

## COMMUNICATION SATELLITES SENT BY ISRO IN THE LAST DECADE

SATELLITE NAME	LAUNCH DATE	LAUNCH MASS	LAUNCH VEHICLE	APPLICATION
CMS-01	Dec 17, 2020	NA	PSLV-C50/CMS-01	Communication
GSAT-30	Jan 17, 2020	3357 kg	Ariane-5 VA-251	
GSAT-31	Feb 06, 2019	2536 kg	Ariane-5 VA-247	
GSAT-7A	Dec 19, 2018		GSLV-F11 / GSAT-7A Mission	
GSAT-11 Mission	Dec 05, 2018	5854 kg	Ariane-5 VA-246	
GSAT-29	Nov 14, 2018	3423 kg	GSLV Mk III-D2 / GSAT-29 Mission	
GSAT-6A	Mar 29, 2018		GSLV-F08/GSAT-6A Mission	
GSAT-17	Jun 29, 2017	3477 kg	Ariane-5 VA-238	
GSAT-19	Jun 05, 2017	3136 Kg	GSLV Mk III-D1/GSAT-19 Mission	
GSAT-9	May 05, 2017	2230 kg	GSLV-F09 / GSAT-9	
GSAT-18	Oct 06, 2016	3404 kg	Ariane-5 VA-231	
GSAT-15	Nov 11, 2015	3164 kg	Ariane-5 VA-227	
GSAT-6	Aug 27, 2015	2117 kg	GSLV-D6	Communication
GSAT-16	Dec 07, 2014	3181.6 kg	Ariane-5 VA-221	
GSAT-14	Jan 05, 2014	1982 kg	GSLV-D5/GSAT-14	
GSAT-7	Aug 30, 2013	2650 kg	Ariane-5 VA-215	Communication & Navigation
GSAT-10	Sep 29, 2012	3400 kg	Ariane-5 VA-209	
GSAT-12	Jul 15, 2011	1410 kg	PSLV-C17/GSAT-12	Communication
GSAT-8	May 21, 2011	3093 kg	Ariane-5 VA-202	Communication & Navigation
GSAT-5P	Dec 25, 2010	2310 kg	GSLV-F06 / GSAT-5P	Communication
GSAT-4	Apr 15, 2010	2220 Kg	GSLV-D3 / GSAT-4	

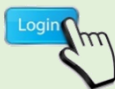
## SALIENT FEATURES

In its fiftieth successful flight, India's Polar Satellite Launch Vehicle (PSLV) launched CMS-01 on December 17<sup>th</sup>, 2020 from the Satish Dhawan Space Centre (SDSC), Sriharikota. CMS-01 is the 42<sup>nd</sup> Communication Satellite of India. With an estimated mission life of over seven years, this will enhance the country's communication networks and aid in e-learning, tele-medicine, and disaster management services.

CMS-01 provides services in Extended-C Band of the frequency spectrum and the coverage includes Indian mainland, Andaman-Nicobar & Lakshadweep Islands.

## FUTURE PLANS: C51

ISRO Chairman Dr K. Sivan said the PSLV-C50 rocket will be followed by the launch of Small Satellite Launch Vehicle (SSLV) carrying EOS-02, and Geosynchronous Satellite Launch Vehicle-F10 (GSLV) carrying EOS-3. The mission will also carry three satellites built by private entities.



<https://www.isro.gov.in/> for more information.



# KNOW YOUR CONSTITUTION – LOK SABHA

## House of the people

Members of the Lok Sabha are directly elected by the people from the constituencies they represent in the states.

Every Indian citizen who has crossed the age of 18 years is eligible to vote.

Each state is divided into constituencies in proportion to its population. This ratio is maintained to the extent possible across India, with the exception of smaller states (population < 60 lakh).

Period of Lok Sabha - 5 years unless dissolved by the President. It may be extended during Emergency (war, armed rebellion etc.) to a maximum of 6 1/2 years.

## Vacancy

A Lok Sabha seat will become vacant when a member:

- resigns by writing to the Speaker.
- is absent for 60 consecutive days of proceedings of the House, without prior permission of the Speaker.
- is subject to any disqualifications mentioned in the Constitution or any law enacted by Parliament.
- is disqualified under the 'Anti-Defection Law' enacted to address instability (moving from the party s/he represented at the time of election, or disobeys the party's decisions at critical times such as during voting on an important resolution.)

	As per the Indian Constitution	Current Structure
Maximum strength	552	545
Members representing the state	Up to 530	530
Members representing the Union Territories	Up to 20	13
Nominated by the President	2 (Anglo Indians)*	2

\*Two members of the Anglo-Indian Community are nominated by the President, if it is not adequately represented in the Lok Sabha.

## Qualification

He/ She should:

- be a citizen of India.
- be above 25 years of age.
- not be a proclaimed criminal.
- have his/her name in the electoral rolls in any part of the country.

## However, a member can be disqualified if he / she

- holds an office of profit.
- is of unsound mind and is so declared by a competent court.
- is an undischarged insolvent (unable to pay debts).
- has voluntarily acquired the citizenship of a foreign country, or is under allegiance or adherence to a foreign State.
- violates party discipline.

MPs from Tamil Nadu in Lok Sabha - 38  
First Lok Sabha session commenced on 13 May 1952.

**Current Lok Sabha Speaker**  
Shri Om Birla

**Current Secretary General**  
Shri Utpal Kumar Singh

**First Speaker of Lok Sabha**  
Shri G.V. Mavalankar

For more information



<https://loksabha.nic.in/>



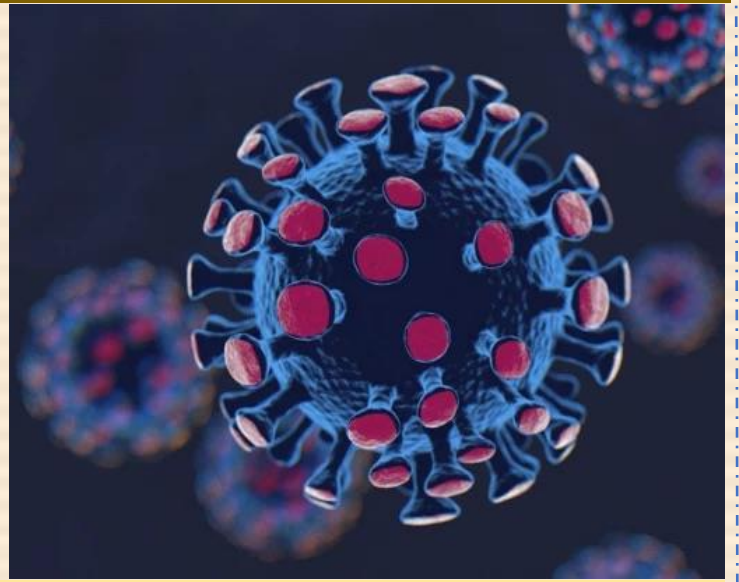


## B.1.1.7 – COVID-19 – THE LATEST VIRULENT STRAIN

UK's strictest coronavirus restrictions since the initial lockdown in March now impacts 24 million people. Reason- a new COVID-19 mutation has almost doubled infections recently.

### How is this strain different?

- It is called "VUI – 202012/01" (first Variant Under Investigation in December) or lineage B.1.1.7.
- Its mutations have occurred on the genetic material that controls the spike protein, which allows Corona and other similar viruses to penetrate host cells, causing infection.
- There are 23 changes (unusually large) that helps quicker spread.
- A recent study says this is 53 percent more contagious.
- No evidence of a more intense illness or higher fatality. But faster transmission leads to increased hospitalisation.



### Are coronavirus variations common?

Viruses undergo small genetic changes as they move through a host population. Scientists have detected at least 1,000 variants so far. But the UK variant is found to be more infectious.

### Will the vaccine still work?

Three leading vaccines are targeting these new mutations. Vaccines produce antibodies against many regions in the spike protein, so a single change would not make the vaccine ineffective. When more mutations occur, the vaccine may need to be altered.

For the seasonal flu which mutates every year, the vaccine is adjusted accordingly. Easily tweakable vaccines have proved to be effective.

### What about outside Britain?

A strain in South Africa shares one of the mutations of the British coronavirus in up to 90 percent of samples since mid-November. On December 24, a report mentions a separate variant developing in Nigeria. Owing to travellers from the U.K. a small number of cases were detected in India, Australia, Canada, Denmark, France, Germany, Italy, Japan, Lebanon, Singapore, Spain, Sweden, Switzerland, the Netherlands and possibly US.

### Why is B.1.1.7 significant?

The reason for alarm is the increasing number of cases in UK and more regions reporting B.1.1.7 infections across the world.

### Strain, Variant, Mutation - are they all the same?

The term strain is appropriate when referring to SARS-Cov-2 (the virus causing the Covid-19 disease) since it is a strain of the wider coronavirus family, including severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS).

VUI – 202012/01 is a variant of SARS-Cov-2.

**Mutation** is the process by which a strain can take on new variations.



## IAF TEST FIRES AIR DEFENCE MISSILES



The Indian Air Force (IAF) carried out a massive exercise to test its air defence missiles including the indigenous *AKASH* air defence system and the *Igla* handheld launchers.

IAF Vice Chief Air Marshal, H S Arora witnessed the Surface to Air Guided Weapons Firing as a part of Combined Guided Weapons Firing 2020 at Air Force Station Suryalanka on December 1. The exercise was conducted from November 23<sup>rd</sup> to December 2<sup>nd</sup> 2020.

### All about AKASH

AKASH is a Short-Range Surface to Air Missile system designed to protect vulnerable areas and points from air attacks. It can simultaneously engage Multiple Targets in Group Mode or Autonomous Mode. It has built-in Electronic Counter-Counter Measures (ECCM) features.

The entire weapon system has been configured on mobile platforms. It is operational with the Indian Air Force (IAF) as well as the Indian Army (IA). The system provides coverage for an area of 2,000 km<sup>2</sup>.

**Mass:** 720 kg | **Length:** 578 cm | **Diameter:** 30 cm - 35 cm  
**Range:** Up to 25 km | **Velocity:** 1.8 to 2.5 Mach.



### Igla

The 9K38 Igla (Russian: "needle"; NATO reporting name SA-18 Grouse) is a Russian/Soviet man-portable infrared homing surface-to-air missile (SAM).

The development of the Igla short-range man-portable air defence system (MANPADS) began in the Kolomna OKB in 1972.

These are possessed by both the Indian Army and the Air Force and are meant to counter low-flying aircraft as the last line of defence against flying objects in a multi-layered air defence system.



**Mass Missile weight:** 10.8 kg | **Full system:** 17.9 kg | **Length:** 1.574 m | **Diameter:** 72 mm  
**Range:** 6.0 km | **Velocity:** 570m/s (peak), about Mach 1.9

### Some important missiles made in India

Brahmos | Prahaar | Prithvi I | Prithvi II | Nirbhay |  
Agni I | Agni II | Agni III | Agni IV | Agni V



For More information

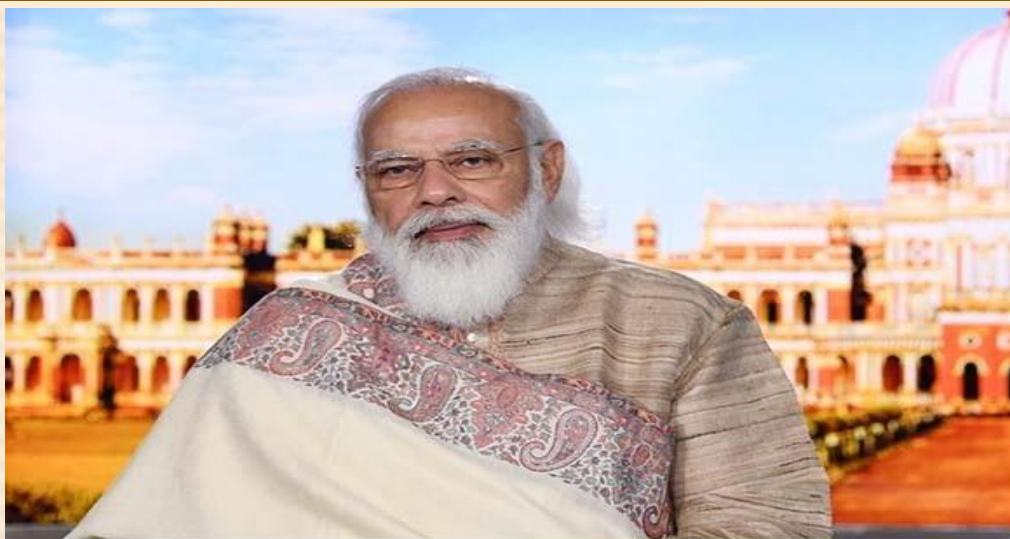


<https://www.drdo.gov.in>





# PM MODI'S VIRTUAL BILATERAL MEETING WITH PM HASINA



"Bangladesh is a significant pillar of our 'Neighborhood First' policy. India's links with Bangladesh are civilizational, cultural, social and economic.

There is a shared history, common heritage, linguistic & cultural ties, passion for music, literature and arts."

**PM Modi visited Bangladesh in 2015 and 2018.**

"India is our true friend. December evokes in all Bangladeshis the spirit of joy, freedom and celebration as we recall with deep gratitude our 'Father of the Nation' Bangabandhu Sheikh Mujibur Rahman, under whose dynamic leadership we earned our great independence."

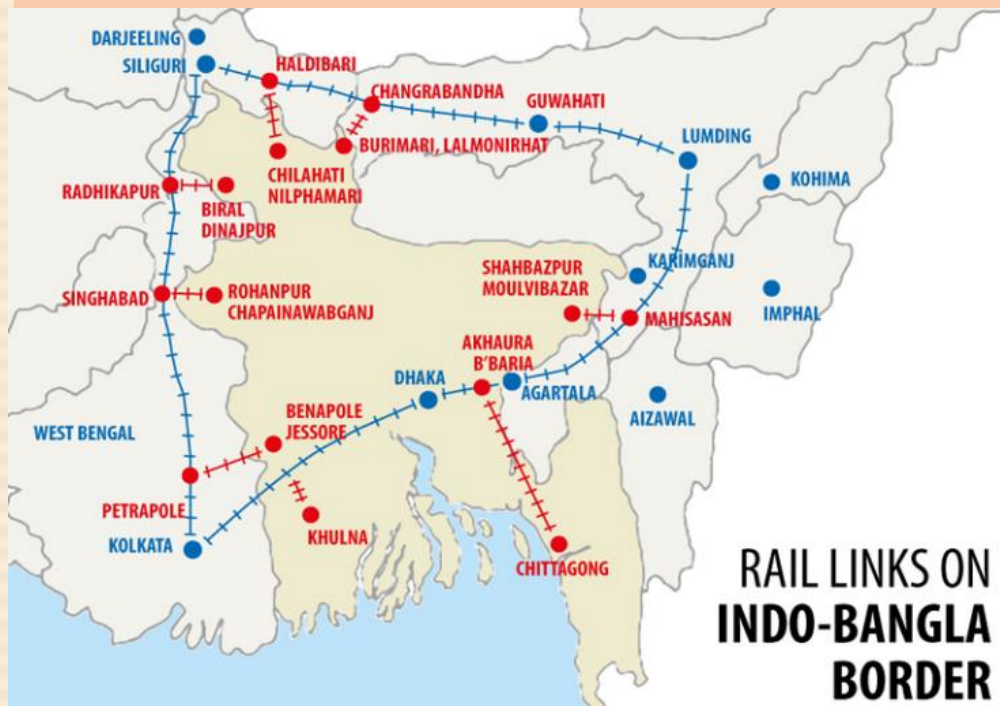
**PM Hasina visited India in 2017 and 2019.**

## Highlights of the Virtual Summit

- The virtual summit was held a day after India celebrated its **50<sup>th</sup> anniversary of the nation's victory over Pakistan in the 1971 India-Pakistan War, a.k.a as Bangladesh Liberation War.**
- Inauguration of Chilahati-Haldibari Rail link.
- Joint inauguration of a digital exhibition on Mujibur Rahman and Mahatma Gandhi to celebrate the life and legacies of the iconic leaders.
- Signing of 7 MoU's between the two countries.
- PM Modi's acceptance of PM Hasina's invitation to visit Dhaka in March 2021.

## Key MoU's signed

- Framework of Understanding (FOU) on cooperation in hydrocarbon sector.
- Protocol on Trans-boundary elephant conservation.
- MOU regarding Indian Grant Assistance for Implementation of High Impact Community Development Projects (HICDPs) through Local Bodies and other Public Sector Institutions.
- MOU on supply of equipment and improvement of garbage / solid waste disposal ground at Lamchori Area for Barishal City Corporation.
- Terms of Reference of India-Bangladesh CEO's Forum.
- MoU between Father of the Nation Bangabandhu Sheikh Mujibur Rahman Memorial Museum, Dhaka, Bangladesh and the National Museum, New Delhi, India.
- MoU on cooperation in the field of agriculture.



## OPERATIONAL RAILWAY LINKS

- Petrapole (India) – Benapole (Bangladesh)
- Gede (India) – Darshana (Bangladesh)
- Singhabad (India)-Rohanpur (Bangladesh)
- Radhikapur (India)-Birol (Bangladesh)
- Haldibari (India)-Chilahati (Bangladesh)

## Benefits

- The new railway link enhances connectivity to West Bengal and Assam from Bangladesh.
- Improves economic development and bilateral trade in the region.
- The 75 km network will help in connecting the country with the Siliguri corridor.
- Improves tourists' flow into the country.

## Do You Know?

- Siliguri Corridor is also called as "Chicken's Neck". It connects West Bengal to the North Eastern States.
- Haldibari-Chilahati -Railway links were operational until 1965. Trains travelling to Assam and North Bengal continued to travel through the then East Pakistan.
- Two more rail links between India and Bangladesh- Karimganj (Assam) to Sylhet (Bangladesh) and Akhaura (Bangladesh) to Agartala (Tripura) will be ready by 2022.
- A railway link connecting India, Bangladesh, Myanmar, Thailand, Cambodia, Vietnam, Laos and Singapore is very much possible in the future.

## INDIA'S FOREIGN POLICY INITIATIVES

### ACT EAST POLICY

- ✓ Initiated by PM Narasimha Rao in 1991
- ✓ Continued by PM Modi in 2014.
- ✓ Main focus on economic and security integration.
- ✓ Ties with South East Asian and East Asian Countries.
- ✓ Focus on trade-specific activities with South East Asian countries.

### NEIGHBOURHOOD POLICY

- ✓ PM Modi Invited Executives of neighbouring countries for his swearing-in in 2014.
- ✓ He visited neighbouring countries to re-ignite bilateral ties.
- ✓ Strong focus on trade, culture and strategic relationships.





# CHENNAI TO BECOME SOUTH EAST ASIA'S DATA CENTRE HUB



## What is a Data Centre?

A data centre is a physical facility that organizations use to house their critical applications and data. Its design is based on a network of computing and storage resources that enable the delivery of shared applications and data.

## The key components of a data centre design:

Routers, switches, firewalls, storage systems, servers, and application-delivery controllers.

## Why are data centres important to business?

- Email and file sharing
- Productivity applications
- Customer relationship management (CRM)
- Enterprise resource planning (ERP)
- Big data
- Artificial Intelligence
- Machine Learning
- Virtual desktops



Adani Enterprises Ltd had entered into a non-binding pact with the Tamil Nadu government for exploring possibilities to invest ₹2,500 crores to set up a 'hyperscale' data centre (DC) in Chennai, called Adani Chennai-1.

The foundation stone for the project was laid in December 2020.

This will boost the city's attempts to become the country's second major DC hub, after Mumbai.

## Location:

Adani Chennai-1 DC will be located at the Siruseri IT Park. It will be the biggest hyperscale tier-3+ DC in Chennai with 32 MW IT load and a one-stop-shop for the telecom and IT infrastructure needs of hyperscale customers.

Chennai already has a number of smaller DCs with investment commitments of over ₹8,300 crore from four large companies, including Yotta Infrastructure, HDCI Data Centre Holdings and Singapore-based ST Tele Media.

Adani's investment commitment will take the tally to around ₹10,000 crore.

Chennai's optic fibre network connectivity with three undersea cable landing stations, adequate real estate with power and its proximity to key Asian cities gives it an edge.

A proactive State government that encourages IT infrastructure also adds to the advantages.



# ARAKU VALLEY-OOTY OF ANDHRA PRADESH

Nestled in the lap of lush forests in the Eastern Ghats, 144 km from Visakhapatnam, is a pristine hill station about 911km above sea level, called the Araku Valley. It is filled with sprawling rich coffee plantations, stunning waterfalls and verdant green fields.

## HISTORY

It was a British Civil Servant N.S. Brodie, who introduced coffee to these hill stations in 1898. After independence, the British-owned plantations were taken over by the Andhra Pradesh Forest Department.

## INHABITANTS

This valley is home to 19 tribes to whom the government has allotted two acres of land with Coffee Plants. These tribes living here are not influenced by the modern civilization and have a distinct cultural identity of their own.



Land in this area is protected by the Scheduled Areas Land Transfer Regulation Act 1 of 1970 which does not allow the sale or transfer of tribal land to non-tribal people.

## OTHER PLACES OF INTEREST IN THE ARAKU VALLEY



### BORRA CAVES

These caves were discovered by William King George of the Geographical Survey of India in 1967. These limestone caves were formed nearly 150 million years ago by water and filled with stalagmites.



### ARAKU TRIBAL MUSEUM

Araku Tribal Museum is a wonderful place which explores the tribal culture of the Eastern Ghats. It gives a taste of what traditional tribal life looks like in Andhra Pradesh.

### PADMAPURAM GARDENS:

This botanical garden was built during World War-II in 1942 in 26 acres of land. It boasts of a variety of species of flora, and is home to an exquisite rose garden, tree top huts. A fun toy train rides around it.



### BHEEMILI BEACH

Located at the origin of River Gosthani. Remnants of 17th century British and Dutch settlements can be seen, including a fort and a cemetery.



## ADDED ATTRACTIONS

Matsya Gundam: Home to a century old temple and home to a pool with a variety of fish.

Tadimada, Chaparai and Katiki Waterfalls.

## TRANSPORT

Travel by train is very interesting as it crosses 46 tunnels and bridges.

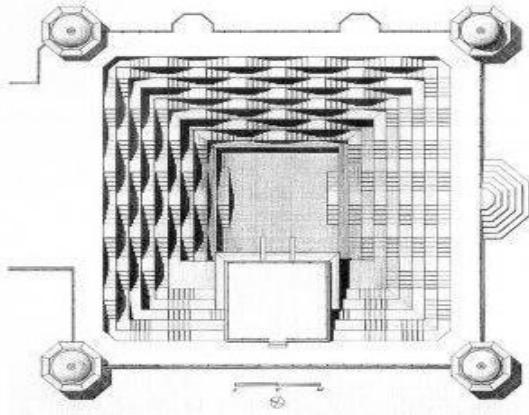






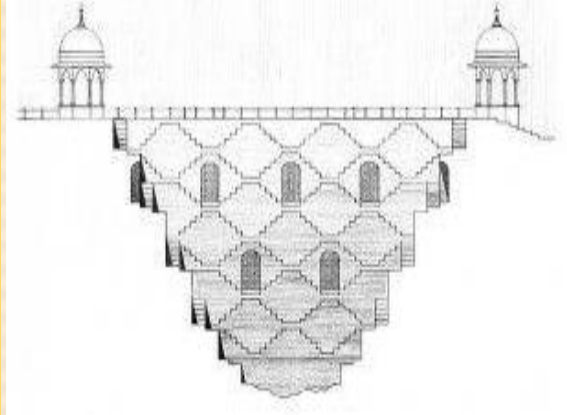


# ARCHITECTURAL MARVELS: STEPWELLS OF RAJASTHAN



India's magnificent stepwells numbering in thousands are predominantly found in the arid regions of Gujarat and Rajasthan. They are sophisticated water-harvesting structures, built throughout India starting around 600 CE.

Typically, with a set of steps leading to a pond at the bottom, stepwells were more than mere reservoirs. They were places for social gatherings and worship as they were often constructed near temples. In Hindi, a step well is referred as a 'Baoli', 'Baori' or 'Kund', and in Gujarati, it is called 'Vav'.



## CHAND BAORI

Abhaneri, Dausa, Bandikui, Rajasthan  
(8<sup>th</sup> -9<sup>th</sup> Century)

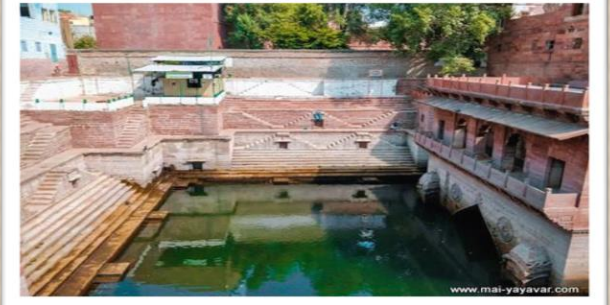
The Chand Baori stepwell is easily one of the most impressive architectural structures in India. With 3,500 steps covering 13 stories that descend 30 meters, this stepwell is a mind-blowing sight to behold. It has a carved temple at the centre and dark, inaccessible arcaded pavilions inside.



## TOORJI KA JHALRA

Jodhpur, Rajasthan  
(18<sup>th</sup> century)

This is in the centre of Jodhpur commissioned by Jodhpur Maharani Gulab Rai as part of a rich local tradition of women overseeing the construction of stepwells. Impressive with multiple pyramidal steps and elegant ornate elements, it represents the best in Rajput architecture.



## PANNA MEENA KA KUND

Amer, Rajasthan  
(16<sup>th</sup> century)

Panna Meena Ka Kund, under a fort in the village of Amer, is a picture-perfect water structure within an ancient temple site. This yellow-coloured square-shaped stepwell was built in the 16<sup>th</sup> century.



# REMEMBERING RAMANUJAN

## Biography

Srinivasa Ramanujan was born on 22<sup>nd</sup> December 1887 in Erode, Madras Presidency at his grandparents' house. His father Srinivasa Iyengar was a clerk in a local sari shop and mother Komalatammal, a housewife. Ramanujan was talented in singing traditional songs and sang in a local temple.

## Ramanujan as a Mathematician

At the age of 16, Ramanujan studied the famous theories in mathematics in various branches. He studied thoroughly 'A Synopsis of Elementary Results in Pure and Applied mathematics' written by G S Carr. The study made Ramanujan an enlightened mathematician to widen his knowledge of the numbering system. He did many experiments, especially in Bernoulli numbers.

## Ramanujan's contribution

Ramanujan was one of the youngest members of Britain's Royal Society and the first Indian to be elected a fellow of Trinity College, Cambridge University. His contribution to mathematical analysis, infinite series, continued fractions and number theory was immense. Ramanujan is most popular for his contribution in analytical theory of numbers, elliptic functions, continued fractions and infinite series.

According to government data, Ramanujan also discovered his own theorems and compiled as many as 3,900 results independently. Besides his published work, Ramanujan left behind several notebooks filled with theorems that mathematicians have continued to study.

The English Mathematician G N Watson, from 1918 to 1951, published 14 papers based on the theorems stated by Ramanujan and in all, he published nearly 30 papers which were inspired by Ramanujan's work. Academicians across the globe agree that Ramanujan's theories transformed 20<sup>th</sup> century mathematics and continue to shape the subject in the 21<sup>st</sup> century.

To know more watch: [https://www.youtube.com/watch?v=jNim3f\\_V7yw](https://www.youtube.com/watch?v=jNim3f_V7yw)

Remembering the Greatest Mathematician of all times



Srinivasa Ramanujan

22 December 1887 - 26 April 1920

Every Year December 22<sup>nd</sup> is celebrated as "National Mathematics day" in India



# FLORA & FAUNA OF INDIA



Bhupen was camping with his friends in Eastern Himalayas. Gazing at the clear sky full of stars, suddenly, he spotted something gliding over his head. Was it a bat, he wondered? Quickly grabbing his camera, he focused on what looked like a squirrel with wings, flitting from one tree to another. Awestruck, his eyes were riveted on the rodent which winged its way around swiftly. It looked like a parachute with a tail.

He later found it to be the Indian giant flying squirrel.

It is one of the largest flying squirrels about 43 cm long and has a 50 cm tail. The flying membranes extend from the wrists to the ankles and enable it to jet out with ease. It is active just after dusk and lives on canopies.

Class: Mammalia  
Order: Rodentia  
Scientific Name: *Petaurista philippensis*





# INDIAN NAVAL MIGHT

Perpetually volatile India-China border situation necessitates strong air power and naval might.

Do You Know?

## CHIEF OF THE NAVAL STAFF

The "Grey Eagle" (senior-most serving naval aviator) of the Navy **Admiral Karambir Singh**, PVSM, AVSM, ADC, is the 24<sup>th</sup> and current Chief of the Naval Staff (CNS) of the Indian Navy.

He replaced Admiral Sunil Lanba as the CNS 31<sup>st</sup> May 2019



Do You Know?

## CHIEF OF DEFENCE STAFF

**General Bipin Rawat**, PVSM, UYSM, AVSM, YSM, SM, VSM, ADC (born 16<sup>th</sup> March 1958) is a four star general of the Indian Army.

He is the first and current Chief of Defence Staff (CDS) of India and assumed office from 1<sup>st</sup> January 2020.

## Indian Navy launched its 5<sup>th</sup> Scorpene Class Submarine

- India is building diesel-electric Scorpene submarines with help from the French. Manufactured by Mazagon Dock, Mumbai, it is part of Make in India campaign.
- The 5th Scorpene class submarine launched in November is named Vagir, the sandfish, a deadly predator of the Indian Ocean. Its advanced acoustics silencing techniques makes it undetectable to the SONAR.
- The submarines can gather intelligence on the surface and are effective in anti-submarine warfare, laying landmines at sea and monitoring the area.

## Missile Launch

- Designed for multipurpose operations, this can release anti-vessel missile launches underwater and from the surface along with attack from a torpedo.
- The Indian navy has two submarines Kalveri and Khanderi built under Project -75. The third, Karanja is in its final stages of sea trial while the fourth "Vela" has started sea trials.
- Simultaneously, the sixth submarine "Vagashir" is being prepared for launch.

## The Indian Navy Obtains A Maritime Guardian from the US



→ India's COMCASA agreement (Communications, Compatibility and Security Arrangement) with USA in 2018 and the latest agreement BECA (Basic Exchange and Co-operation Agreement) will help India get armed drones liked Reapers and Predators for long range precision strikes on land and sea.

→ The Indian Navy has leased two sea guardian drones from USA for surveillance over Indian Ocean Region (IOR).

→ The Hitech drones manufactured by the US firm General Atomics arrived at INS Rajali, the Arakkonam Naval Air Station in November and have been inducted into the flying operations.

→ A fleet of Poseidon 81 Maritime reconnaissance and anti-submarine warfare aircrafts carry out surveillance in Eastern Ladakh.

SPECIFICATIONS OF THE DRONE	
Wing span	79ft
Length	38 ft
Range	5500 nautical miles
Endurance	40 hours
Altitude	40,000 feet

These Sea Guardians monitor all the "Choke Points" from the Pacific Gulf to Malacca Straits in the IOR and can be used for anti-ground warfare, anti-submarine warfare, humanitarian assistance/disaster relief, search and rescue, law enforcement (to counter drug trafficking, illegal immigration and piracy) activities.

India had signed a defence deal of US\$ 3 million for procuring 24 MH-60 "Romeo" Naval helicopters and six Apache attack choppers during President Trump's visit to India in February 2020.

## KNOW ABOUT JEE MAINS (2021)

The JEE MAIN exam is conducted for admissions into undergraduate engineering and architectural programme at IIT's, NIT's and other institutions.



1<sup>st</sup> Session: Feb 23-28

2<sup>nd</sup> Session: March 15-18

3<sup>rd</sup> Session: April 21-30

4<sup>th</sup> Session : May 24-28

Online applications can be submitted till January 16<sup>th</sup> 2021, with the application portal reopening after each session.

For more details, visit <https://jeemain.nta.nic.in>

## The Prajya Team

### Contributors:

Archana Sundar | D.A.V. Matric, Gill Nagar  
Krishnakumar C S - D.A.V. BHEL School, Ranipet  
Priyadharsshini S - D.A.V. Boys, Mogappair  
Sandhya Nair | D.A.V. Secondary School, Mogappair  
Sarada Devi Ravutu - D.A.V. Girls, Gopalapuram  
Shubha T R | D.A.V. Boys, Gopalapuram  
Sudipta Sinha | D.A.V. Girls, Mogappair  
Sumathi Ramakrishnan | D.A.V. Boys, Mogappair  
Vaishnavi V - D.A.V. Boys, Gopalapuram

### Creative Designer:

Shri Guhaprasath Subramanian

### Editorial Board:

Smt Mali Nandakumar | Educational Consultant  
Shri Nandakumar V | Educational Consultant  
Smt Nandhini S | Principal | D.A.V. (M), Gill Nagar



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