

Dear Students

MARCH 2021 EDITION

**शक्त्या: धैर्यमायाति** (From strength comes courage)

A nation is as strong as its ability to defend itself from its enemies. A secure and safe environment for the defence forces will keep them physically and mentally strong. In this issue you can read about the efforts taken towards the same, including the specially designed solar tents.

Read to know in this longer edition, how India paid homage to one of the greatest leaders of the Indian Army and also about the Indian Navy's exposition of strength. We bring you India's strategic moves to make the East stronger and its powerful positioning to honour its business commitments despite threats of sanctions from rival nations.

We have given an insight into the central theme of the Union Budget as could be easily understood by you students. Read about India's resolution to protect the environment while fulfilling its desire to progress economically, in the articles on Davos, green tax and geo thermal power project.

The inspirational story of Jyothi Kumari shows evidence of Nari Shakti, the feminine power. You can also read about the endangered Hoolock gibbon and go back to the prehistoric Dickinsonia.

We look forward to your support and suggestions.

Editorial Team

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## PM at the World Economic Forum

- The WEF annual meeting in Davos (Switzerland) engages the world's top leaders to shape global, regional and industry agendas. WEF launched the **Great Reset Initiative** in the post Covid world, via video conferencing in January 2021.
- PM Modi spoke on **'Fourth Industrial Revolution - using technology for the good of humanity'**.

### INDIA'S KEY POINTS

- Garib Kalyan Rojgar Abhiyaan provided livelihood opportunities to the migrant workers who returned home due to Covid-19 lockdown.
- India is working on Industry 4.0- connectivity, automation, artificial intelligence and real-time data.
- National Digital Health Mission provides easy access to health care by giving Unique Health ID to its citizens.
- Aatmanirbhar Bharat is committed to improving India's capacity, capability and reliability to strengthen global supply chains.
- India has invited global players to take advantage of the 26-billion-dollar Production Linked Incentive (PLI) scheme.
- National Clean Air Programme (NCAP) is a five-year action plan with a tentative target of 20-30% reduction in concentrations of PM10 and PM2.5 by 2024, with 2017 as the base year.



## CAS - Climate Adaptation Summit 2021



For more information, log on to <https://www.cas2021.com/outcomes>

The online **Climate Adaptation Summit (CAS) 2021**, in January focused solely on adaptation to the irreversible climate change.

As the host, Netherlands' Prime Minister Mark Rutte introduced the **Adaptation Action Agenda** to help guide efforts over the next decade. 22 heads of state, more than 50 ministers and leaders of international organizations gathered to make new pledges and commitments including:

- **Increasing Finance for Adaptation**
- **Integrating Adaptation Throughout Public and Private Sector Decisions**
- **Scaling Up Adaptation Initiative.**

The leaders will meet at the United States Climate Leaders' Summit, United Kingdom Climate and Development Forum, G7, G20 and COP26 in November 2021 in Glasgow. Each of these present opportunities for governments to turn words into action.

However bolder, faster and more specific actions are needed to help vulnerable communities.

## Myanmar Coup – A glance



1989 will ring a bell in the ears of the Myanmar military which changed the name of Burma to Myanmar. One reason for the flashback is that the military rule is back in Myanmar as a result of the coup.

A yearlong state of emergency has been declared in the country. Several National League for Democracy (NLD) officials were also detained as part of the coup.

The Myanmar military's Ming Aung Hlaing has taken over as the country's ruler. The military has promised another election once the state of emergency is over.



### Commanders and leaders

|   |   |
|---|---|
| Win Myint<br>(President of Myanmar)               | Min Aung Hlaing<br>(Commander-in-Chief of the Tatmadaw) |
| Aung San Suu Kyi<br>(State Counsellor of Myanmar) | Myint Swe<br>(Vice-President of Myanmar)                |

Observers say this has come in the backdrop of Aung Sang Suu Kyi's landslide victory in the recent elections. Opposition had demanded a recount and alleged election fraud. Myanmar's election commission refuted these claims and said there was no evidence.

The US and UK have imposed sanctions on Myanmar. Several Southeast Asian neighbours such as Cambodia have said this is an internal matter of Myanmar.

The UN Secretary-General António Guterres said it was a "serious blow to democratic reforms". China has blocked a UN statement on the matter and is against any international intervention.

While India did not condemn the coup like the US, there were two references to 'democracy' in its cryptic statement.



# SpaceX creates a new world record

Elon Musk's SpaceX broke the world record of carrying the greatest number of satellites by a single rocket, Falcon 9. It carried 143 payloads into space on 26<sup>th</sup> January, 2021.

The previous record was held by ISRO which deployed 104 satellites in February 2017 in a single launch.

**Falcon-9:**  
World's first  
reusable rocket



## Objective

To provide global broadband internet coverage all over the world by 2021.

Of the 143 satellites, 133 were government and commercial spacecraft and 10 were Starlink satellites which were the part of SmallSat Rideshare program of SpaceX. The mission was designated as Transporter-1.

## About SpaceX

- **Space Exploration Technology Corporation.**
- **CEO:** Elon Musk
- **Founder:** Elon Musk
- **Founded:** 6 May 2002
- **Headquarters:** Hawthorne, California
- **Revenue:** 200 Crores USD (2019)



## Notable satellites launched

- **3 small CubeSats** as part of NASA's V-Rx3 mission for testing new technologies to enhance spacecraft communication and navigation.
- **3 Hawk-2 satellites** for monitoring and locating emergency beacons (wireless transmitters) to improve response during emergencies.
- **YUSAT** and **IDEASat** for mapping the ionosphere.



SpaceX had previously launched more than 800 satellites



# Indo - Russian S-400 deal



The S-400 is Russia's most advanced long-range, surface-to-air missile defence system.

India is planning to induct the \$5.4-billion worth advanced S-400 TRIUMF missiles despite threats of US sanctions.

In October 2018, India signed the deal to buy five units and in 2019, paid the first tranche (USD 800 million). Training of Indian military specialists will happen soon.

India's decision to acquire the S-400 was based on cost effectiveness and a thorough evaluation of its own security requirements, including plans to create a ballistic missile defence shield over key cities.

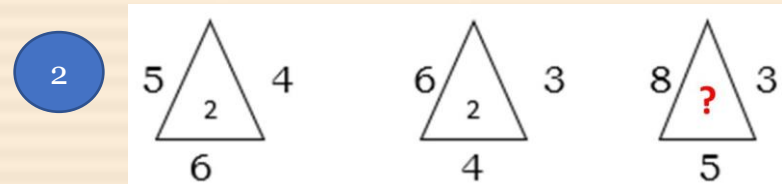
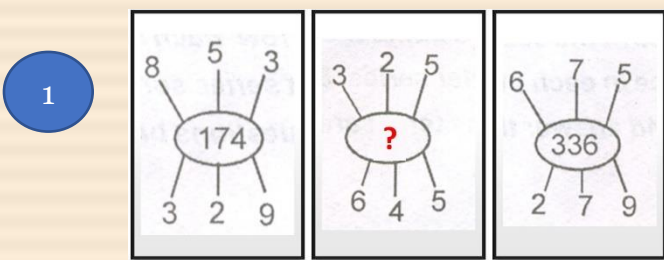
The US sanctioned its NATO ally Turkey under the **Countering America's Adversaries Through Sanctions Act (CAATSA)** for acquiring the S-400, mainly because Western platforms operating in the same environment would provide Russia valuable data on how to defeat those systems.



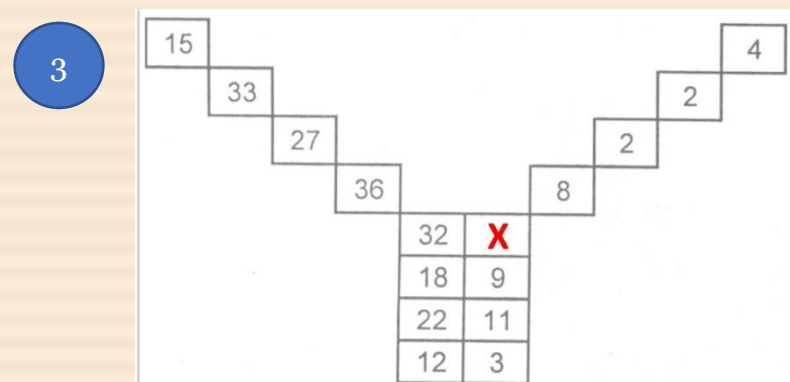
## CURIOSITY corner

Mathematical and logical puzzles make up an integral part of recreational mathematics. Try and solve these puzzles

Find the missing number:



Find the value of X in the following figure.



- 4 If walking animals are called **swimmers**, crawling animals are called **flying**, aquatic animals are called **snakes**, and flying animals are **hunters**, then what will a **lizard** be called?
- (A) Swimmer (B) Snake  
(C) Hunter (D) Flying



# Newsmaker of the month

## Anganwadi Worker Relu Vasave Oarswoman to the rescue



- Relu Vasave (28), an Anganwadi worker from Nandurbar, Maharashtra, rows 18 kms on the Narmada to the remotest parts of her village to serve expecting mothers and children.
- Her job involves monitoring their health, giving doses of medication and nutritional supplements as per government protocol.
- Her village is so far away that in the absence of roads, the villagers from Chimalkhadi and neighbouring hamlets commute only by boats.
- In normal conditions, women visit the Anganwadi centre for check-ups, but sometimes Relu's job demands her to reach pregnant women and provide home vaccinations.
- Relu would also conduct awareness sessions for the people. Her extraordinary work, which has helped 138 women and children so far, got recognised by her senior officials and even the chief executive officer of the Zilla Parishad.
- Remarkably, not a single child was found severely malnourished during the COVID-19 lockdown.

Watch Relu Vasave in action

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



## India - Japan Act East Forum



The 5<sup>th</sup> joint meeting of the India-Japan Act East Forum (AEF) co-chaired by Foreign Secretary Shri Harsh Vardhan Shringla and Japanese Ambassador Suzuki Satoshi was held on 28<sup>th</sup> January 2021.

It reviewed the progress of ongoing projects in the Northeastern region of India in areas including connectivity, hydropower, sustainable development, harnessing of water resources and skill development.



It also explored new areas such as healthcare, agro-industries and SMEs, bamboo value chain development, smart city, tourism, and people-to-people exchanges.

The AEF was established on 14<sup>th</sup> September 2017 to provide a platform for India-Japan collaboration in the North Eastern Region under **India's "Act East Policy"** and **Japan's** vision for a **"Free and Open Indo-Pacific"**.



## World's first energy island



Denmark will construct the world's first energy field island in the North Sea, which, with winds of up to 7.8 metres per second, provides a tremendous opportunity for wind power generation.

This move has come as the European Union's plans of transforming its electricity system to renewable energy within a decade.

### Highlights

**Size** 23 acres (=18 soccer fields)

### Goals

- Slash carbon emissions by 70% by 2030 compared to 1990 levels; reach carbon neutrality by 2050.
- Produce and store green energy (180 gigawatts) for 3 to 10 million European households.
- Divert energy to help shipping, aviation and other heavy transportation.
- Shut all European coal-fired power plants.
- Increase offshore wind capacity to 25-fold by 2050.
- Expand with other new innovative technologies in forthcoming years.

**Cost** \$33 billion / €28 billion

**Location** 80 km into the North Sea



## Know Your Constitution - Rajya Sabha

The Rajya Sabha (or Council of States), the upper house of the Parliament is a permanent House, not subject to dissolution.

Members are elected by the state MLAs and the Electoral College members of the Union Territory through the **Single transferable vote**. One-third of members retire after every second year. Full term of an elected member is six years.

### Single transferable vote

Electors can vote for any number of candidates in order of their preference. Each vote has a value of 100 in the first round. The winner gets the maximum first preference votes.



The formula is  $[(\text{Number of MLAs} \times 100) / (\text{Vacancies} + 1)] + 1$ .

### Sample scenario

- Party A (100 seats) and Party B (40 seats) in a 140-seat Assembly. Both parties can field 3 candidates each for the three Rajya Sabha seats.
- A candidate should get 3,501 votes or the backing of 36 MLAs to win.
- However, counting may go to the second round, if more than one candidate fails to get the specified number.

Allocation of seats is proportional to the population of each State.

| Composition/Strength  | As per Indian Constitution | Current Structure |
|---|----------------------------|-------------------|
| Maximum strength  | 250                        | 245               |
| Members representing the States and UTs   | 238                        | 233               |
| Nominated by the President (distinguished persons with expertise in various fields) | 12                         | 12                |

**Biennial Election** - every second year to elect new members.

**Bye-election** - to fill a vacancy caused by resignation /death /disqualification of a member.

*A member elected in a bye-election remains member for the rest of the term of the seat.*

### Qualification

He/ She should

1. Be a citizen of India
2. Be above 30 years of age
3. Be a registered voter in a Parliamentary constituency
4. Promise allegiance to the Constitution and uphold sovereignty of India

### Disqualification

If he/ she

1. holds any office of profit under the State or Union government
2. is of unsound mind
3. is an undischarged insolvent (unable to pay debts)
4. is a citizen of or under allegiance to a foreign State
5. is disqualified by or under any law made by Parliament

**Chairman** - Vice President of India - M. Venkaiah Naidu

**Secretary General** - Desh Deepak Verma, IAS

**Leader of the house** - Thaawar Chand Gehlot (BJP)

**Leader of the Opposition** - Mallikarjun Kharge (INC)



## First Female Chief of WTO



Dr Ngozi Okonjo-Iweala, 66, named **Director-General** by representatives of the 164 countries that make up the **WTO**, is the **first woman** and the **first African** in its 25-year history to head it. Her term, renewable, expires in 2025.

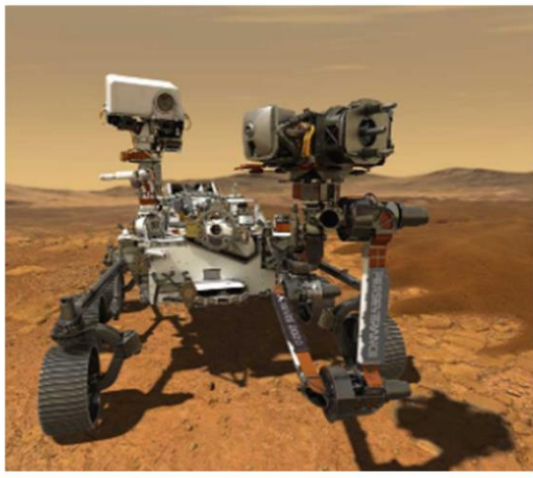
She said her first priority would be "to implement the policy responses we need to get the global economy going again" post COVID-19 crisis. Other big tasks include reforming the organization's dispute resolution process and finding ways for trade rules to deal with digitalization and e-commerce.

Okonjo has been Nigeria's Finance Minister and Foreign Minister, and an advocate for economic growth and development in poorer countries during her 25-year career at the World Bank (WB). She has a Bachelor's Degree (Economics) from Harvard and a Ph.D. (Regional Economics and Development) from the MIT. As Managing Director of WB, she oversaw \$81 billion in development financing in Africa, South Asia, Europe and Central Asia.

In 2005, Euromoney named her **Global Finance Minister of the Year**.



## Perseverance Rover lands on Mars



**Perseverance**, the car-sized rover designed to explore Jezero Crater as part of **NASA's Mars 2020 mission**, was launched on 30<sup>th</sup> July 2020 from Cape Canaveral in Florida and landed on 18<sup>th</sup> February 2021.

Also traveling with it is *Ingenuity*, a solar-powered 1.8 kg helicopter drone which will scout for ideal driving routes for the rover over its planned 30-Martian-day (31-Earth-day) experimental flight test window.

### Objectives

1. Identify past environments capable of supporting microbial life.
2. Seek signs of possible past microbial life in those habitable environments, particularly in specific rock types known to preserve signs over time.
3. Collect core rock and regolith ("soil") samples and store them on the Martian surface.
4. Test oxygen production from the Martian atmosphere.

### Instruments on the rover

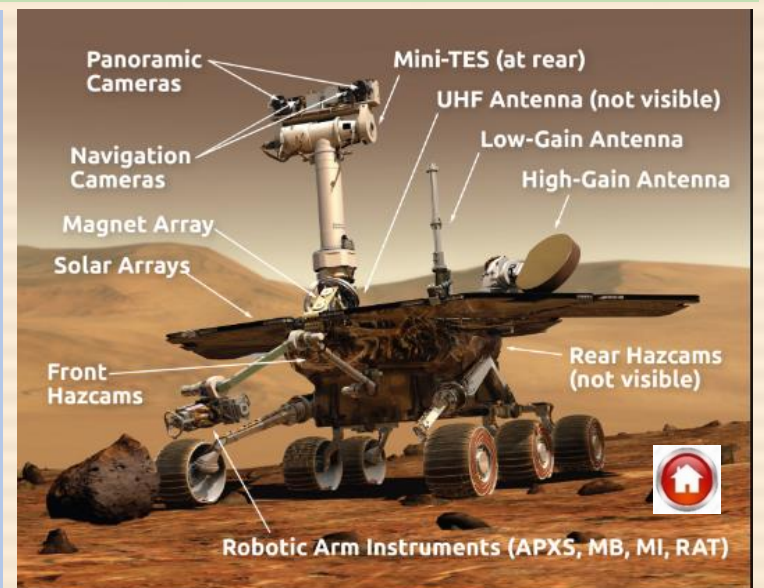
- An X-ray fluorescence spectrometer to detect the composition of materials.
- A ground-penetrating radar to image different ground densities, structural layers, buried rocks, meteorites, and detect underground water ice and salty brine at 10m depth.
- A set of sensors that measure temperature, wind speed and direction, pressure, relative humidity, radiation, and dust particle size and shape.
- An exploration technology investigation that will produce a small amount of oxygen from Martian atmospheric carbon dioxide.
- An instrument suite to provide imaging, chemical composition analysis, and mineralogy in rocks and regolith from a distance.
- A stereoscopic imaging system with the ability to zoom.
- An ultraviolet Raman spectrometer that uses fine-scale imaging and an ultraviolet laser to determine fine-scale mineralogy and detect organic compounds.

The orange-and-white parachute used by rover to land on Mars contained a secret message, that was discovered and deciphered by Twitter users. The hidden message in the parachute colour pattern was "Dare mighty things", a quote from President Roosevelt, and the unofficial motto of Jet Propulsion Laboratory.

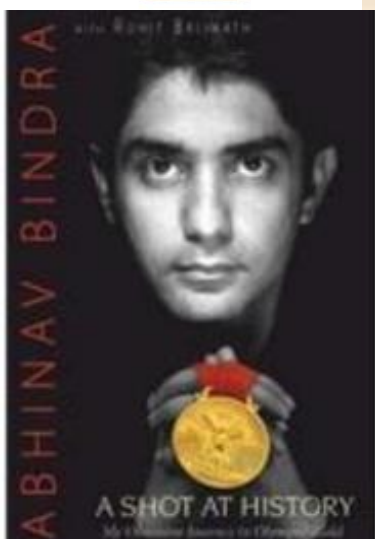
In appreciation of healthcare workers who helped during the pandemic, a plate with a staff-and serpent symbol was placed on the rover.

Following a nationwide "Name the Rover" contest for school children, 28,000 proposals were submitted. **A seventh-grade student, Alexander Mather submitted the winning entry.**

To raise public awareness, NASA undertook a "Send Your Name To Mars" campaign, through which people could send their names to Mars on a microchip stored aboard *Perseverance*. Participants received a digital ticket with details of the mission's launch and destination.



### BOOK-CENTRE



## A Shot at History: My Obsessive Journey to Olympic Gold

**This book** is the autobiography of Abhinav Bindra, India's first gold medallist in the 10-metre air rifle category in 2008 Olympics.

With the help of sports writer Rohit Brijnath, Abhinav traces his remarkable journey from being a talented child with a hobby to a man who becomes the best in the world. The time and effort, attention to detail, experimentation, personal growth and the setbacks he overcame reveal the true champion.

Abhinav once even soled his shoes with rubber from Ferrari tyres because he thought it would help. His single-minded passion proved that no obstacle was too hard, no amount of practice too much, no experiment too futile and no defeat too severe.

He says that only hunger for success helps people achieve their dreams and denies that only the best training, coaches can lead to anyone's success. He acknowledges with gratitude the role of various coaches who helped him become a professional. The readers get to understand the unique situation faced by Olympians.

While cricketers or golfers have many opportunities to prove themselves in a single year, an Olympian gets a chance only once in four years.

This inspirational book provides a roadmap for all those who want to achieve great heights in their career.



# Aatmanirbhar Bharath Abhiyan

On 12<sup>th</sup> May, 2020, Prime Minister Narendra Modi announced Aatmanirbhar Bharat Abhiyan (ABA) to build a resilient and self-reliant India based on five pillars comprising **Economy, Infrastructure, Technology, Demand** and **Demography**.

An economic stimulus package of Rs 20 lakh crore was announced under this to aid the country during the COVID-19 crisis.

The disruption in global supply chains and the military stand-off with China at the borders have accentuated the need for India to grow economically stronger and become self-subsistent.

India has the largest youth population, a labour force of 500 million and a formidable consumer market, with an immense potential to become a global power.



For that, India must build robust domestic manufacturing capacity and also constantly engage with the world and gain global competence. Many countries are looking to reduce their dependence on China and moving their manufacturing elsewhere.

ABA aims to attract countries to manufacture and invest in India. With its **Production Linked Incentive** scheme, local and foreign companies in 13 sectors will be encouraged to expand and develop manufacturing in India. This is expected to double the workforce in manufacturing and production activities and play a vital role in integrating India with global supply systems integrally.

Already under the PLI scheme, Apple's contract manufacturers, as well as global giants like Samsung and local handset makers Lava and Dixon have agreed to start production in India.

To kindle the entrepreneurial spirit of the nation, a little "push" is needed from the government to drive industrial activities in new areas and build confidence among entrepreneurs, reduce imports and increase exports.

Indigenisation can unlock India's potential and attract foreign investment. India's call for Aatmanirbhar Bharat during COVID-19 crisis showed optimistic results. India had not produced a single Personal Protective (PPE) kit and relied heavily on imports. Scarcity of medical equipment worldwide made India seize the opportunity and showcase its capacity (**zero in March to 60 million PPE suits in October; India, in fact, exported 20 million!**).

Similarly, **150 million N-95 masks were produced and 40 million exported**. India has the largest vaccine manufacturing capacity today, which the UN Chief praised as the "best asset" of the world. India has exported millions of free doses to countries to help all humankind fight the pandemic. Aatmanirbhar Bharat serves India and humanity.

Economist Angus Maddison said India was the largest economy (33% of the world GDP in the first century CE) with its flourishing trade across the globe. Achieving self-sufficiency in defence, manufacturing, education, health, agriculture, foreign policy etc., can reinstate India as a global superpower.

[Read More](https://www.firstpost.com/india/union-budget-2021-qli-scheme-for-13-manufacturing-sectors-will-includue-firms-in-global-supply-chains-9263401.html)

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## Green Tax Proposal

### What is Green Tax?

It is a tax that encourages people not to harm the environment or helps pay for things that are eco-friendly.

The Union Minister for Road Transport and Highways Nitin Gadkari has approved a proposal to levy Green Tax.



### HIGHLIGHTS

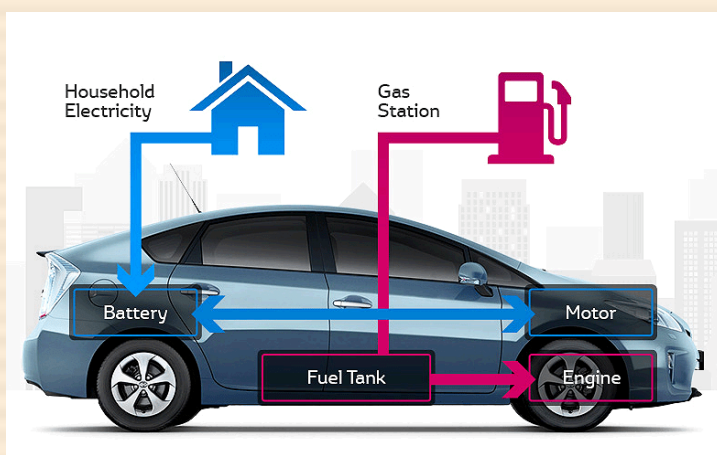
- Vehicles older than 8 years could be charged 10% to 25% of road tax at the time of renewal of fitness certificate.
- Personal vehicles to be charged during renewal of Registration Certificate after 15 years.
- Public transport vehicles to be charged lower.
- Higher tax (50% of Road Tax) for vehicles registered in highly polluted cities.
- Differential tax, depending on fuel and vehicle type.
- Strong hybrid vehicles, electric vehicles and those using CNG, ethanol, LPG etc. to be exempted.
- Vehicles used in farming to be exempted.
- Revenue collected to be kept in a separate account and used for tackling pollution.

### GOALS

- Dissuade people from using vehicles which damage the environment
- Motivate people to switch to newer, less polluting vehicles
- Reduce pollution levels; make the polluter compensate

### Do you know?

A **hybrid** is a vehicle that combines a conventional internal combustion engine system with an electric propulsion system.



# What was Budget 2021 all about?

Despite setbacks during COVID crisis, businesses picked up pace post lockdown. An important lesson learnt from the coronavirus experience is the importance of the private sector's contribution. For the first time, it was reflected in the Union Budget unapologetically.

The clear message is that India is eager to repair the adverse impact of socialism on its primary engine of growth, i.e., private enterprise.

## Reforms

The government pushed harder for digital payments, as businesses with a turnover of less than ₹10 crore, that have 95% digital transactions, will be exempted from maintaining audited accounts.

This will significantly reduce paperwork for them.



Government will also reduce its share in the Life Insurance Corporation to 51% by amending the LIC Act, 1956, which is in line with PM Modi's "the government has no business to be in business." speech.

For the budding entrepreneurs in the country, 'small businesses' would include those with a turnover of up to ₹20 crores (₹50 lakhs earlier). This will provide even later stage start-ups access to government schemes and benefits, helping them grow faster.

## Infra and Privatisation

The government will privatise *all* other sectors barring four—a bold move. Among the corporations that will be privatised, the most significant are Bharat Petroleum Corp Ltd, Air India, Shipping Corporation of India, Container Corporation of India, IDBI Bank, Bharat Earth Movers Ltd and Pawan Hans. The government's push for privatisation will also impact the power sector by introducing competition. Currently, they are monopolies, either government or private.

A common problem is that the informal economy of India—run by construction workers, gig workers and other labourers—is left out of benefits like insurance, housing and healthcare. The government will set up a portal for collecting information which will enable mainstreaming their participation. This is a huge step towards making the weakest link in the chain stronger. Their contribution to India's growth story can be exponential.

The focus is on infrastructure development to enhance growth. Connectivity received a major boost as new technologies like MetroLite and MetroNeo will help develop metro rail services in minor cities. Major road-enhancement projects are being undertaken in Kerala, Tamil Nadu, West Bengal and Assam. The cartography space has also been opened up to private players and Indian entrepreneurs will be able to create their own mapping systems.

## Railways

Railways received a 52% increase in budget allocation, (from ₹70,000 crore to ₹1.1 lakh crore). The Draft **National Rail Plan (NRP)** details revolutionising Indian railways.

'**Dedicated Freight Corridors**', (exclusive railway routes) will lead to faster and more economical movement of goods. Additionally, all broad-gauge routes will be electrified by 2023.

This budget will be remembered for its determined push for privatisation.



# India's First Geo Thermal Plant

On 7<sup>th</sup> February 2021, an agreement for establishing the first geothermal Power Project in Ladakh was announced.

## Highlights

- The project is called **Geothermal Field Development Project**.
- To be **commissioned by the end of 2022**.
- Located at **Puga village** with a potential of **> 100 mw of power**.

## MoU signed by

- Union Territory of Ladakh
- Ladakh Autonomous Hill Development Council- Leh



## Development

- **PHASE I:** Exploration within the **depth of 500 metres**.
- **PHASE II:** **Deeper and lateral exploration of geothermal reservoirs** by drilling wells; setting up of a higher capacity demo plant in Ladakh.
- **PHASE III:** **Promotion of joint ventures and commercial projects**.

## Advantages

- **Eco-friendly** resource to meet heating, cooling and electricity demands for the future.
- **Renewable** energy that will last until the Earth is destroyed by the sun in around 5 billion years.



Renewable energy is useful energy that is collected from renewable resources, which are naturally replenished on a human timescale, including carbon neutral sources like sunlight, wind, rain, tides, waves, and geothermal heat.

This type of energy source stands in contrast to fossil fuels, which are being used far more quickly than they are being replenished.

## Geothermal energy

- Is the heat in the rocks and fluids beneath the earth.
- 1.6 km deep wells or more holes are drilled into underground reservoirs.
- These tap steam and hot water to drive the turbines which are linked to electricity generators.



# PM Modi meets Bal Puraskar Awardees



India's highest civilian honour for those below 18 is **Bal Puraskar Award**

32 children were awarded the **Pradhan Mantri Rashtriya Bal Puraskar** for their exceptional abilities and outstanding accomplishments. Two categories of awards relating to children:  
 → Bal Shakti Puraskar  
 → Bal Kalyan Puraskar

## Bal Shakti Puraskar

→ Instituted as the National Child Award for Exceptional Achievement (1996); renamed in 2018.  
 → Given annually for Innovation, Scholastic Achievements, Social Service, Arts & Culture, Sports & Bravery.

### Eligibility

→ An Indian citizen residing in India; 5-18 years of age.

### Award

→ A medal, a cash prize of ₹ 1,00,000, book vouchers worth ₹ 10,000, a certificate and citation.

## Bal Kalyan Puraskar

→ Instituted as the National Child Welfare Awards (1979); renamed in 2018.  
 → Given to individuals and institutions for contribution in the field of Child Development, Child Protection and Child Welfare.

### Eligibility

→ An Indian Citizen residing in India; > 18 years (as on 31st August of the respective year); S/he should have worked at least 7 years for the cause of children.

→ The Institution should not be entirely funded by the government and should have been performing consistently in the field of Child Welfare for 10 years.

### Award

→ Three awards are given in each of the two categories- Individual and Institution along with a cash prize ₹ 1,00,000 and ₹ 5,00,000 respectively.

**32 applicants from across 32 districts of 21 States/UTs were selected for Bal Shakti Puraskar**

|                         |   |
|-------------------------|---|
| Art and Culture         | 7 |
| Innovation              | 9 |
| Scholastic Achievements | 5 |
| Sports                  | 7 |
| Bravery                 | 3 |
| Social Service          | 1 |

PM Modi and Union Women and Child Development Minister Smriti Irani interacted with the awardees via video conferencing on 25th January 2021.

He said that this year's awards are special as the recipients earned them in the difficult times of the pandemic.

The PM asked the children to keep three pledges in their mind:

- 1. Pledge of Consistency** - no slackening of speed of action.
- 2. Pledge for the country** - treating every work in terms of the country; thinking what one can do for India.
- 3. Pledge of humility** - becoming more humble with every success.

Advising the children not to rest on their laurels but continue to strive for better, he asked them to read biographies to remain inspired.



**JYOTI KUMARI** is a 16-year-old Bal Puraskar 2021 awardee (Bravery) from Darbhanga district of Bihar. During lockdown, she cycled 1,200 kms from Sikandarpur in Haryana with her injured father on the rear seat to reach home.

The Cycling Federation of India even offered her a trial as a trainee at National Cycling Academy, but she wishes to complete her matriculation first.

Citation of Bal Puraskar 2021 awardees.

[https://nca-wcd.nic.in/resources/homePage/99/540/assets/citation\\_booklet\\_2021.pdf](https://nca-wcd.nic.in/resources/homePage/99/540/assets/citation_booklet_2021.pdf)

Also watch a short movie on PMRBP-2021 awardees at

[https://nca-wcd.nic.in/resources/homePage/99/540/assets/PM\\_Rashtriya%20Bal%20Purskar%202021.mp4](https://nca-wcd.nic.in/resources/homePage/99/540/assets/PM_Rashtriya%20Bal%20Purskar%202021.mp4)

## Unhailed Heroes – Alluri Sitaram Raju (The Warrior)

The liberty and rights that we enjoy today are the outcomes of the sacrifices of thousands of freedom fighters.

One such unsung star was **Alluri Sitaram Raju**.

Born in West Godavari District (Andhra Pradesh) on 4th July 1898 to Venkata Rama Raju and Suryanarayamma, he was interested in astrology, herbalism, palmistry and horse-riding before becoming a sannyasi at the age of 18.

Tribal people of Gudem Hills revered him as a messenger of God and believed he had divine powers.

With the Madras Forest Act (1882), the British gained complete control by banning shifting cultivation and restricting collection of forest products. Major parts were declared reserved and this denied entry of even the tribals who lost their traditional rights over forests. Their life was ruined and survival challenged.

Sitaram Raju organized an armed uprising against this injustice (**Rampa Rebellion of 1922**). His warriors adopted guerilla warfare against the British Army. Attacking government offices and police stations, they looted arms and ammunition. Several cruel police officers were killed. The rebellion ended in 1924 with the capture and shooting of Sitaram Raju.

Raju lives in the heart of the tribals even today as "Manyam Veerudu" ('Hero of the Jungle'). Several folk tales narrate his heroism. The valour and sacrifice of revolutionaries like him motivated several youngsters to join the struggle for independence.





# KAPILA – Kalam Program for IP Literacy and Awareness

The Union Education Minister Ramesh Pokhriyal virtually launched KAPILA on the 89th birth anniversary of Dr APJ Abdul Kalam, for intellectual property literacy and for creating patent awareness.

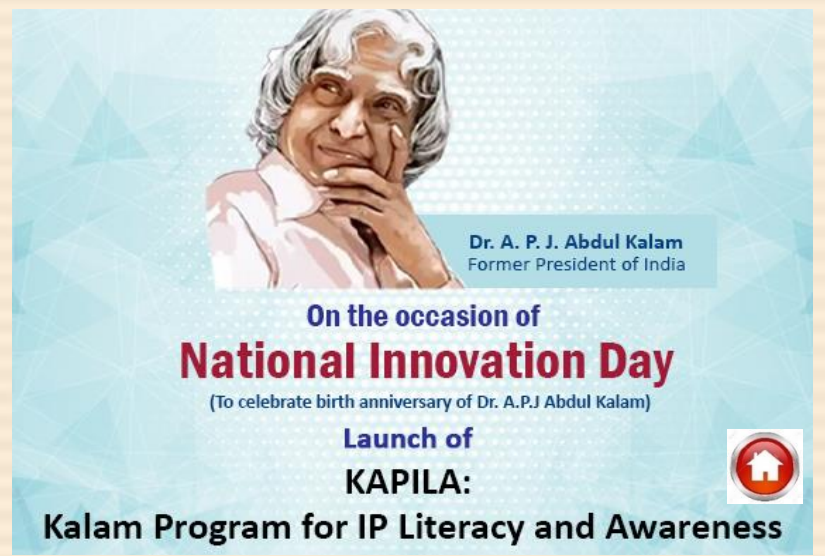
He highlighted the need to make and patent inventions to be self-sufficient.

He encouraged the citizens to work on a mission mode as India has ample resources to be tapped, and appealed to the youth to use their talent to innovate.

He added that the government will facilitate institutions to encourage students to file their patents.

So far, 46,556 users have already been registered for KAPILA.

The central government launched the KAPILA scheme for Higher Education Institutions to:



1. Create awareness regarding Intellectual Property Rights

2. Development of credit course in Intellectual Property Rights

3. Enable Intellectual Property protection of inventions by students and faculty

4. Develop a vibrant Intellectual Property filing system

5. Train faculty and students on Intellectual Property Rights

## Museum to Commemorate General Thimmayya

President Ram Nath Kovind inaugurated the General Thimmayya Museum in Madikeri, built at Sunnyside, formerly the residence of the General.



### Gen. Kodandera Subayya Thimmayya

- Brigade Commander in WW II in Burma Campaign
- Commander of 268 Infantry Brigade in Japan (The British Commonwealth Force) (1945)
- Commander of Indian Force J&K (1948)
- General Officer Commanding in Chief (separate tenures) of all the three Commands then - Southern, Eastern and Western; first Indian Colonel of the Kumaon Regiment (1949-1961)
- Awarded the Distinguished Service Order (DSO) and earned international fame as Chairman of the Neutral Nations Repatriation Commission in Korea (1953); Padma Bhushan (1953).

### Key attractions of the museum

- A statue of the General in uniform greets as one enters.
- Numerous artefacts and memorabilia
- A mural showing Field Marshal Claude John Eyre Auchinleck, British Army Commander during WW II meeting General Thimmayya at Sunnyside.
- A battle tank used during the 1971 war with Pakistan.
- Arms and ammunition; a MiG-21 fighter jet.

### An Overview of Gen Thimmayya and Thimmayya Museum

<https://www.youtube.com/watch?v=e4IbhQQ39Bg>

## India's first Wildlife Protection Corridor

### Overview

- India's Ministry of Road Transport and Highways will construct an Economic Corridor between Delhi and Dehradun.
- The 180 kilometres long Expressway will be an elevated corridor for the protection of wildlife as it will pass through pristine forest areas. It will also be Asia's largest wildlife corridor.
- This ₹12,300 crore project will be awarded by August 2021 and estimated to be completed by 2023.

### Highlights

- This is **India's first highway** with a **12km long elevated corridor** for wildlife protection.
- Project to be executed under EPC mode (Engineering, Procurement and Construction).
- Would **reduce the distance** between Delhi and Dehradun from 250 km to **180 km** and the **travel time** from 5 hours to **about 2 hours**.
- Entire corridor to be designed to have **minimum driving speed of 100 kph**.
- **Way side amenities** every 25-30 km for enhancing road user experience.
- Closed toll mechanism only to the extent of highway use.
- Would boost the economy of the Uttarakhand and its tourism.
- A total of 25 kilometres of elevated road – **6 km in the open, 14 km in tunnels**.
- Restricted ROW (right of way) due to wildlife concerns.



### Phase 1

Between **Akshardham** and proposed **EPE** (Eastern Peripheral Expressway) **junction**.

A 6-lane carriage way and 6-lane service road; will decongest North East Delhi.

### Phase 2

Between **EPE junction** and **Ganeshpur** near Saharanpur bypass.

6 lanes, fully access controlled; the entire length is greenfield for about 118 km, passing through Muzaffarnagar, Shamli, Baghpat and Saharanpur districts. Likely to have **7 interchanges and 60 underpasses**.

### Phase 3

Between **Ganeshpur** and **Dehradun**.

Passes through Reserve Forest in Uttar Pradesh and Uttarakhand. **15 km is elevated** wildlife corridor and **5 km is brownfield** (unused land) expansion.



## Architectural Wonder – Badami Fort

Built in 543 A.D. by King Pulikeshi.

**Chalukyan** capital from 540 -757AD; destroyed by the Pallavas in 642 AD.

Badami Fort is built in the Chalukyan style of architecture. Double fortification walls surround it. The structures within offer a glimpse of its architectural grandeur. The entrance is guarded by a statue of Nandi, Lord Shiva's bull.

With massive walls and a huge gate, the fort encompasses large granaries, an enormous underground chamber, carved temples, strategically located watch towers and several other impressive structures.

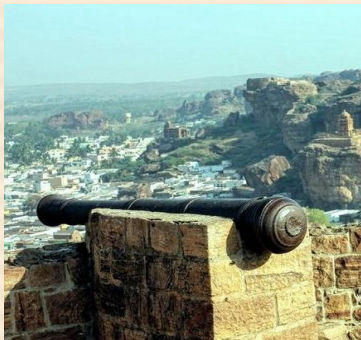
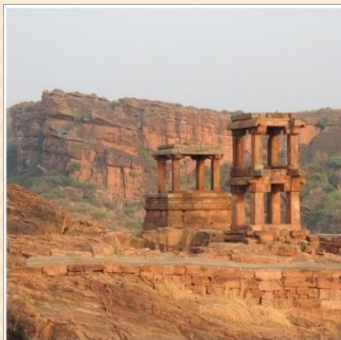
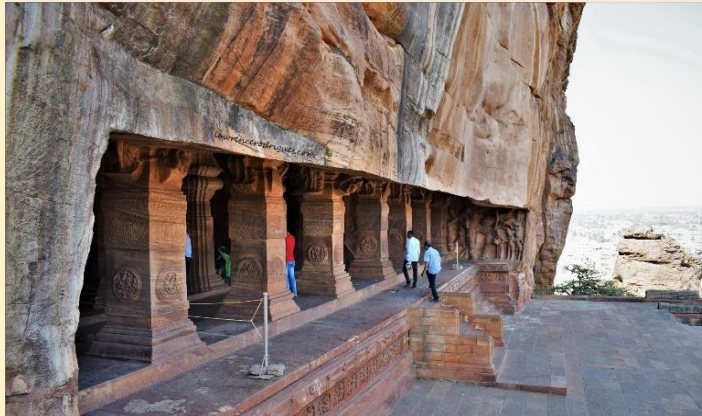
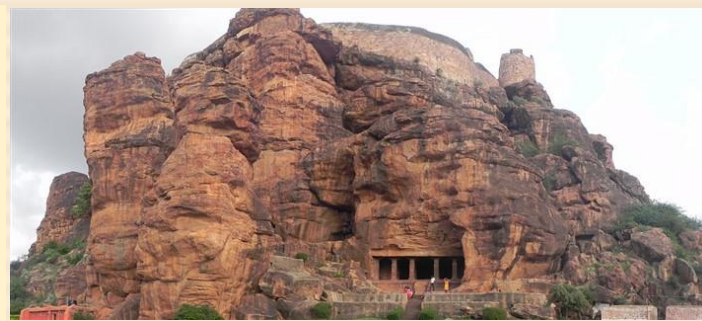
A masjid like structure situated at the centre is believed to have been constructed by Tipu Sultan. A large cannon reminds us of the various attacks witnessed by the silent fort.

The ancient fort lost much of its beauty and glory due to the ransacking by rulers of the other dynasties.

Malegitti Shiva Temple, one of the oldest in the region, is located here.

The fort is currently under the maintenance of the Archaeological Survey of India (ASI).

There is a pathway built by ASI that goes round the fort to facilitate tourist movement.



## Geographical Wonders - Hide and Seek Beach – Odisha



Odisha is known for many enchanting beaches. The jaw-dropping sight of the waves receding from the shoreline to nearly 5 km makes Chandipur beach distinct.

Caused by lunar gravitational pull, this phenomenon happens every day, at least twice. The low tide leaves behind a sand dune-blanketed water bed, over which one can even take a peaceful walk.



### Biodiversity

Apart from a variety of fish species, the beach is replete with small red crabs, horseshoe crabs, oysters and many other species of molluscs. It is also famous for beachcombing.

The sight of casuarina trees along with the lush green coastal vegetation is a visual treat for its visitors as much as the myriad hues of the sunset.



### OTHER PLACES OF INTEREST AND ATTRACTION

#### How to Reach

Travel to Balasore via rail, then catch a taxi, auto-rickshaw or bus from the Balasore Railway Station, which is approximately 14 kilometres away from Chandipur Beach.



#### Chandipur

It is well known for its alliance with DRDO integrated test range.

#### Devkund Waterfall

This 'plunge' waterfall underneath is a popular spot for a one-day picnic.



**Talasari beach**  
Talasari is Odisha's second largest mangrove forest.



## Flora & Fauna of India- Hoolock Gibbon



- The only ape found in India. The numbers have been declining due to habitat destruction and hunting for meat.
- The Gibbon Wildlife Sanctuary in Assam is the first ever Protected Area named after a primate species.
- The **western hoolock gibbon** (*Hoolock hoolock*) - found in all the north-eastern states. Listed as **Endangered** in the IUCN **Red List**.
- The **eastern hoolock gibbon** (*Hoolock leuconedys*) inhabits parts of Arunachal Pradesh and Assam. Listed in the IUCN as **vulnerable**.

### Characteristics

- Long and slender arms; swing from tree to tree (Brachiation) at speeds up to 55 km/hr, covering up to six meters in just one swing.
- Diet - mainly of fruits, but sometimes also leaves, shoots and flowers.
- Males and females – similar in size. Males are black with a distinctive white brow; females are copper-tan with dark brown hair on the sides of their face, and a clear central parting in the head hair. They remain together for years, though mating outside the pair has been noticed occasionally.
- Use their well-known emotive calls echoing across the forest to attract mates.
- One offspring every 2-3 years; it remains within the family troop for 7-10 years.

### Do you know?

IUCN - International Union for Conservation of Nature provides an objective assessment system for classifying the status of organisms threatened with extinction.

Login



Watch the Hoolock Gibbon : <https://www.youtube.com/watch?v=WfMnzkrAdVw>



# Know Your Nation - Nagaland



## Basic Facts

**Capital** – Kohima  
**Official Language** – English  
**Main spoken languages** – Ao, Konyak, Angami, Sema, Lotha  
**No of Districts** – 11  
**Created on** – 1<sup>st</sup> Dec 1963  
**Titles** - “Falcon capital of the world”; “Land of Festivals”



## Historical Facts

During World War II, Kohima city and regions of Manipur witnessed Japanese forces invading through Burma (now Myanmar).

## Geographical Facts

- Shares borders with Assam, Arunachal Pradesh, Manipur and international boundary with Myanmar.
- Mostly hilly with Mount Saramati as the highest peak of Naga hills. This peak is shared with Myanmar.
- Mithun (a semi domesticated bull) found only in north eastern states is the state animal.

## Socio Cultural Facts



Kohima War Cemetery

- One of the three states with Christian majority (others are Manipur and Meghalaya).
- Major tribes - Ao, Sangtam, Chakhesangs, Kukis, Kacharis, Angamis, Konyaks, Aos, Sumis, Changs, Lothas etc.
- The state has witnessed long episodes of insurgency and inter-ethnic conflict.
- Only Indian state which showed population drop between 2001 and 2011 census.



Hornbill Festival, Kohima

## Swachh Bharat ~SUCCESS STORIES~ Bin Free, Litter Free, Jeth nagar



Success is often made up of initiatives, small and unremarkable at first but translate into something immensely significant when nurtured patiently over a substantial period of time.

In 2016, an overflowing bin in front of his house made Ravi Nandyala, a resident of Mandaveli, lodge a complaint to the SWM contractor of Chennai Corporation. The employee politely accepted the mistake and appealed to him to contribute to the process.

Ravi as the founder-president of the residents' association plunged into action to make Jeth Nagar a bin-less locality. They began awareness drives on segregation of waste at source.

The eight streets of Jeth Nagar generate 950 kg of solid waste daily. Ravi spoke to the corporation officials and the contractor in charge for door- to –door waste collection. In eight months, 70% of the residents handed their waste to the workers at their doorstep. But household composting didn't work for them.

Ravi wrote to the Prime Minister's Office (PMO) with photographs. A team from PMO came for inspection and soon, a compost centre was set up nearby. Conservancy workers now take the green waste to the compost centre.

They also set up an IOT bin (bin with internet- enabled application) only for collecting plastic waste. After four years of collaborative hard work, the locality has become completely bin- free.

They also set up an IOT bin (bin with internet- enabled application) only for collecting plastic waste. After four years of collaborative hard work, the locality has become completely bin- free.

## CURIOSITY ANSWERS

- In first figure,  
 $5 \times 4 + 6 = 26$   
In second figure,  
 $6 \times 3 + 4 = 22$   
Missing number in third figure,  
 $8 \times 3 + 5 = 29$
- In first figure,  
 $8 \times 5 \times 3 + 3 \times 2 \times 9 = 120 + 54 = 170$   
In second figure,  
 $6 \times 7 \times 5 + 2 \times 7 \times 9 = 210 + 126 = 336$   
Missing number in third figure,  
 $3 \times 2 \times 5 + 6 \times 4 \times 5 = 30 + 120 = 150$
- The top left number is obtained by adding the bottom two numbers.  
The top right-hand number is the result of dividing the bottom two numbers. Thus,  
 $12 + 3 = 15, 12 \div 3 = 4$  ;  
 $22 + 11 = 33, 22 \div 11 = 2$  ;  
 $18 + 9 = 27, 18 \div 9 = 2$ .  
So,  $32 + X = 36$  and  $32 \div X = 8$  or  $X = 4$ .
- A lizard is an animal which crawls and hence is called 'flying'.



Read More : <https://youtu.be/SohfHO9PSci>

ITERATION  
is the  
key to  
INNOVATION

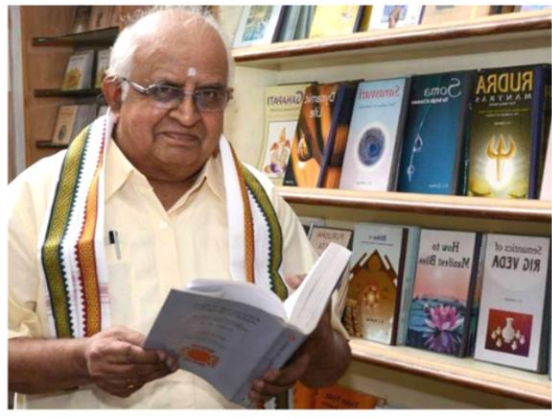
[prajya.magazine@davchennai.org](mailto:prajya.magazine@davchennai.org)

Comments?  
Suggestions?

We want to hear from you!



## Know Your Padma Awardees – Shri R L Kashyap



Dr. Rangasami Lakshminarayan Kashyap (born 1938) has made fundamental contributions in the field of **Computer Pattern Recognition** and **Machine Intelligence** as well as **Vedic Studies**.

He has received several major awards viz. the King-Sun Fu Award (1990), J.C. Bose Award (1991) for his immense contributions to science.

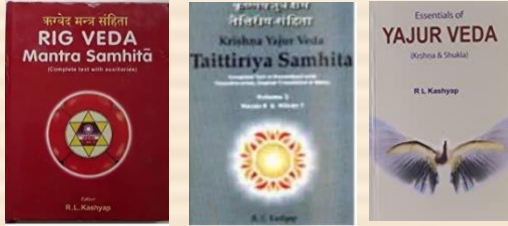
His journal and doctoral work continue to be referred by scholars.

His 25 books translating all the Vedas (over 25000 slokas), explaining the secrets of the Veda Suktas, have been translated into various languages and won him many awards like 'Vedanga Vidvan', "Rajyotsava Award" and "Veda Brahma".

Kashyap set up SAKSI (Sri Aurobindo Kapali Sastry Institute of Vedic Culture) for the revival of Vedic knowledge. Through e-books, DVDs, a mobile van (Veda Vahini) and outreach programmes, it takes Vedas to the masses including school children in Karnataka.

It has also tied up with several institutions in US, UK, South Africa, Slovenia, Mexico, Indonesia, Chile, Venezuela and other countries to spread Vedic knowledge. He holds weekly classes explaining the Veda mantras and Upanishads.

Kashyap is the only person in the world to translate all the four Vedas in English. Padma Shri was conferred in 2021 for preservation, research and dissemination of the Vedas.



Some of his prominent books



Dr R L Kashyap's speech on Vedic Knowledge : <https://www.youtube.com/watch?v=7vMxAwh9Omk>

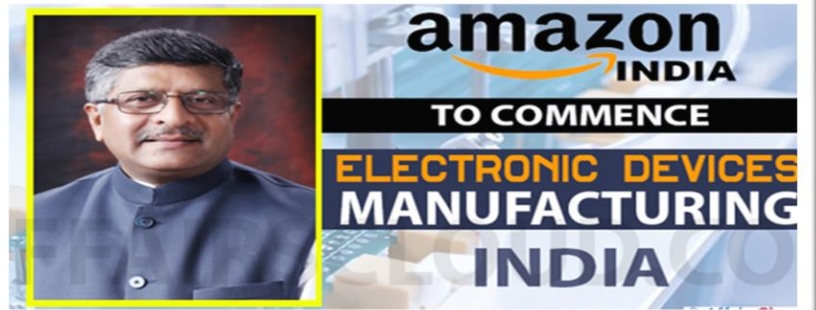


## Amazon's new manufacturing unit in Chennai

**Amazon**, partnering with Cloud Network Technology, is setting up its first device manufacturing line in India to make Fire TV sticks at its Chennai plant.

This reiterates Amazon's commitment to the '**Make in India**' project. It will produce lakhs of Fire TV Stick devices (for video streaming) every year, catering to Indian customers.

Amazon said it will continuously evaluate scaling capacity to additional marketplaces/cities depending on the domestic demand.



"India is an attractive investment destination and is poised to become a major player in the global supply chain in the electronics and IT products industry. Our government's production-linked incentive (PLI) scheme has received tremendous response globally," said Ravi Shankar Prasad, Minister for Communications, Electronics & IT.

He added that Amazon's unit will enhance domestic production capacities and create jobs as well.

Amazon has over 22,000 neighbourhood stores registered across the country gathering additional footfalls through their online presence and furthering their earning potential by acting as pick-up points, logistics partners, and experience centres for e-commerce, it said.



## World's oldest animal fossil

Three fossils of the world's earliest known living animal **Dickinsonia** were discovered on the roof of Bhimbetka rock shelters, an archaeological site situated around 45 km from Bhopal.

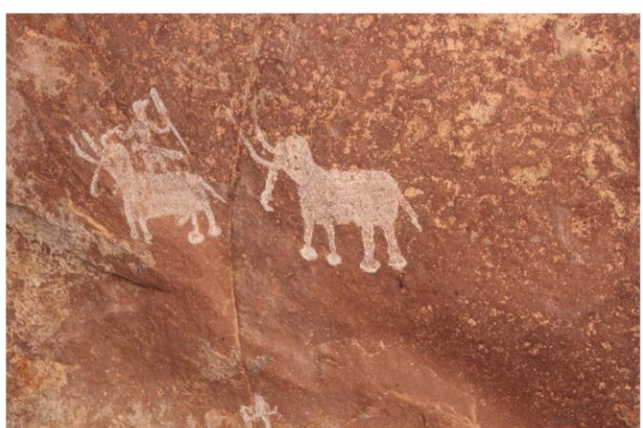
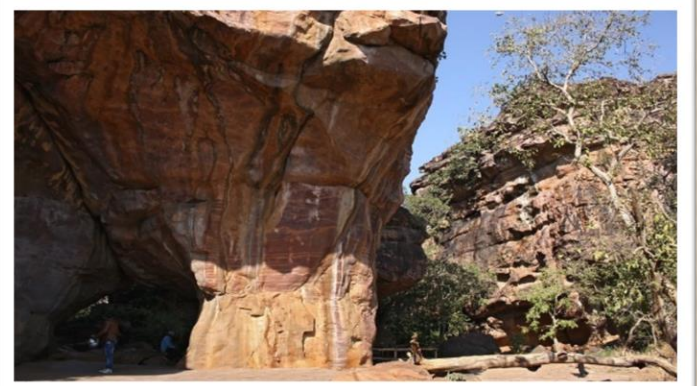
*Please refer to "Bhimbetka Rock Shelters: India's Oldest Human ART" in PRAJYA Dec 2020 issue on this UNESCO World Heritage site.*

The fossils have distinct white leaf-like patches with a central midrib and connecting veins. While one fossil is 17 inches long, the other two are smaller. They have been known only in the form of imprints and casts in the sandstone beds.

The new discoveries are right at the beginning of the 'Auditorium Cave', which dates back to 570 million years.

The hidden Dickinsonian fossil was discovered accidentally by two experts from the Geological Survey of India.

They primarily found the leaf-like impression above the ground, which had almost perfectly blended with the rock and could have been mistaken for a pre historic rock art.



**Fossils are the remains of plants and animals that lived long ago. Bones, shells, stone imprints of animals, DNA remnants etc are fossils.**

**The first specimen of Dickinsonia was discovered in South Australia.**

**The Bhimbetka rock shelters were found 64 years ago, but these fossils remained undetected till recently.**

**Palaeontology is the study of fossils by scientists called Palaeontologists.**

**Dickinsonia existed during the late Ediacaran period, approximately 635 – 541 million years ago.**



## Smart Anti Airfield Weapon (SAAW)

Defence Research and Development Organisation (DRDO) is a Government agency that develops indigenous technology in defence sector.

One of its key achievements is the development of Smart Anti-Airfield Weapon, which was successfully test fired on 21st January 2021.

This was the ninth successful mission of SAAW conducted by DRDO till now. The telemetry and tracking systems installed at Interim Test Range (ITR), Balasore captured all the mission events.

While earlier tests have been conducted from Jaguar, this time HAL Hawk-1 was used, thus expanding the operating scope of the weapons system.

SAAW is designed and developed by Research Centre Imarat (RCI) Hyderabad. The 125 kg class weapon is capable of **engaging ground enemy airfield assets such as radars, bunkers, taxi tracks, and runways, up to a range of 100 km**. The high precision guided bomb is lightweight and belongs to the glide bomb category.

As an emerging world power in defence production, India can strengthen its own defence and also increase export capability.



## Operation Sard Hawa



India has a land boundary of 15200 km. Climatic and geographic conditions along the international borders are extremely harsh and unfriendly. Desert, snow covered mountains, thick forests and flooding rivers makes surveillance a challenging task.

**Border Security Force (BSF)** a separate para military force formed in 1965 to meet cross-border terrorism, smuggling, army intrusions etc. has been playing a vital role in defending our border.

Situations become harsher during winter. Terrorists try to cross the borders under the snow cover. Constant vigil is the only remedy.

BSF launched a special campaign named **Operation Sard Hawa** on the western international border of Rajasthan this winter. The week-long operation was carried out from **21<sup>st</sup> January to 27<sup>th</sup> January 2021**. Intelligence reports about possible terrorist strikes during the Republic Day celebration also motivated this campaign.

Officers and Jawans of all the BSF branches took part. Additional personnel were deployed in sensitive places. Four-layer security system was established with modern weapons and gadgets. Vehicle and foot patrolling along with camel patrolling was intensified.

## Third batch of Rafale jets arrive

The third batch of 3 aircraft from France landed on Jan 27<sup>th</sup> 2021 flying over 7000Km with in-flight refuelling.

Multi-role tanker transport (MRTT) of the UAE Air Force provided mid-air refuelling to the fighters.

The second batch (3 jets) reached the Jamnagar airbase in November 2020 and flew to their home base in Ambala.

The first batch (5) reached Ambala on July 29 and were formally inducted into the IAF in an event attended by Defence Minister Rajnath Singh, French Defence Minister Florence, Chief of Defence Staff Gen Bipin Rawat and Air Chief Marshal RKS Bhadauria.

India ordered 36 warplanes to constitute two squadrons in September 2016 under a government-to-government deal.

The IAF will induct three to four jets every two months. The second Rafale squadron will be raised at Hasimara in West Bengal to strengthen the eastern sector.



|   |                                    |
|---|------------------------------------|
| Top speed   | 2222 kph                           |
| Service ceiling<br>(Max. height, the jet can sustain) | 50,000 ft                          |
| Operational range                                     | 3700 km                            |
| Fuel  | Internal: 4.7 t<br>External: 6.7 t |

### Highlights

- Can carry out ground and sea attack, air defence, reconnaissance and nuclear strike deterrence.
- Can carry almost 10 tonnes of weapons.
- The India-specific enhancements include:
  - Cold engine start capability to take off from high-altitude bases
  - Radar warning receivers to identify hostile tracking system
  - Flight data recorders can store 10 hours of data
  - Infrared search and multi directional radar system to detect 40 targets simultaneously within 100 km
  - Jammers and towed decoys to ward off incoming missiles



# Indian Navy's Largest War-Game

The morale boosting **Theatre Level Operational Readiness Exercise (TROPEX 21)** of the Indian Navy showcased the capability of all its assets - warships, corvettes, submarines, fighter aircraft and maritime patrol aircraft, helicopters and fast patrol boats.

## Aim

- To test the combat readiness of the Navy.
- To validate Navy's offensive-defence capabilities, safeguard national interests in the maritime domain and promote stability and peace in the Indian Ocean Region (IOR).

## Location

Over a vast geographical expanse in the IOR.

## Phases

TROPEX progressed over distinct phases which tested the Navy's transition from peacetime to hostilities.



| Phase                | When  | Location   | Objective  | Participants  |
|----------------------|---|--|--|---|
| Exercise Sea Vigil   | 12 - 13 January 2021  | Entire coastline and Island territories of India | To validate the coastal defence setup, which was entirely revamped after the 26/11 terror attacks in Mumbai.                             | Indian Navy, Coast Guard, Marine Police of 13 coastal states and Union Territories and other stakeholders in the maritime domain. |
| Exercise AMPHEX - 21 | 21- 25 January 2021   | Andaman and Nicobar group of Islands             | To demonstrate India's capabilities to safeguard its island territories and enhance joint war-fighting capabilities of the Armed Forces. | Army, Navy and Air Force  |
| Weapon Workup Phase  | The Weapon Workup Phase of TROPEX witnessed multiple 'on-target' deliveries including missiles, torpedoes and rockets from frontline warships, aircraft and submarines and demonstrated the lethal firepower of the Indian Navy. This reaffirmed the Navy's capability to carry out long range maritime strikes in the IOR to ensure safe seas and secure coasts. |  |  |   |



# Solar-heated tents for Indian Army

Internationally-renowned educator and inventor, Sonam Wangchuk, has developed a solar-powered portable military tent to protect India's border forces from the below-freezing temperatures of the Himalayas. Although the stand-off between Indian and Chinese forces at the Galwan Valley saw some new positive developments, tensions still run high between the two neighbours stationing thousands of troops in high-altitude regions of Ladakh.

The finer details are not disclosed owing to the pending patent of the product.

## Features

- Pre-fabricated structure that can be assembled and disassembled easily.
- Partly equipped with solar panels that gather heat from the sun; the rest is completely insulated.
- Weighs under 30 kgs.
- A viable alternative to the single-layered tents that soldiers use at the border.
- Can accommodate up to 10 soldiers.
- Costs roughly Rs 5 lakh. (current container cabin costs around 10 lakh)
- Troops need not use kerosene.
- Eco-friendly.



## Sonam Wangchuk

Born in Ladakh, a mechanical engineer by qualification, Sonam has been working mostly in education reform for over 30 years. Wangchuk designed the SECMOL (Students' Educational and Cultural Movement of Ladakh) campus which runs entirely on solar power for heating, lighting and cooking. He also invented the **Ice Stupa technique** - artificial glaciers, capable of storing water gathered during winter to be used during spring and summer.

# The Prajya Team

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