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# 2-Minute Series

*A compilation of foundational topics prerequisite for Civil Services*

*For the 4th Week*

*of*

# March 2021

*(22nd March to 27th March)*

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# 1. Geography

## 1.1. Thirty Meter Telescope Project

- The Thirty Meter Telescope is a new class of extremely large telescopes that will allow us to see deeper into space and observe cosmic objects with unprecedented sensitivity.
- The Thirty-meter telescope (TMT) project is an international partnership between the USA, Canada, Japan, China, and India.
- It will produce 12 times sharper images than the Hubble Space Telescope, which is the largest and most versatile telescope in the world till date.
- Location : Maunakea in Hawaii.



### Facts About Mauna Kea

- Mauna Kea is a dormant volcano on the island of Hawaii.
- Its peak is 4,207.3 m (13,803 ft) above sea level, making it the highest point in the state of Hawaii and second-highest peak of an island on Earth.
- Alternate Sites

### Application

- India's achievements in the field of Space /Science and Technology
- Religion
- Case Studies

### Question Of The Day

1. Which of the following are false?

- 1. Semeru Volcano: Indonesia
- 2. Sangay Volcano: Ecuador
- 3. Cotopaxi: Ecuador
- 4. Krakatau Volcano: Chile

- A. Only 1
- B. Only 2
- C. Only 3
- D. Only 4



## 2. History

### 2.1.Lala Lajpat Rai

# Lala Lajpat Rai Birth Anniversary: PM Modi Pays Tribute

Lala Lajpat Rai Jayanti: Prime Minister Narendra Modi paid tribute to freedom fighter Lala Lajpat Rai on his birth anniversary today.

All India | Edited by Debjani Chatterjee | Updated: January 28, 2021 11:40 am IST

#### TRENDING



Anushka-Virat With Baby Vamika, Hardik-Natasa With Son Agastya Fly To Pune



"Minister Was In Hospital When...": Sharad Pawar On Letter Bomb- 10 Facts



Actor Harman Baweja Marries Sasha Ramchandani. See Pics And Videos



Lala Lajpat Rai Jayanti: PM Modi pays tribute

- “If I had the power to influence Indian journals, I would have the following lines printed in bold letters on the first page: Milk for the Infants, food for the Adults and Education for all”

### Points to Remember

- Belonged to Dudhike village in Punjab’s Ferozpur District and was a lawyer by Profession, practices at Lahore High Court
- Known as “Punjab Kesari” and ‘Lion of Punjab’.
- Influenced by Swami Dayanand Saraswati and joined the Arya Samaj at Lahore.
- Believed that ideals in Hinduism combined with nationalism will lead to establishment of a secular state.
- Was involved with the Hindu Mahasabha.
- Co-Founded the Punjab National Bank in 1894.
- Lead out a strong struggle against Untouchability and worked towards an egalitarian society.
- He was elected President of INC in the Calcutta Special Session of 1920.egalitarian society.
- Elected Deputy leader of the Central Legislative Assembly in 1926.

### Contributions - Political

- Part of INC and Opposed the partition of Bengal and for his political agitation was deported to Burma without trial in 1907, but due to lack of evidence against him he was released.

- Founded Home Rule League of America in 1917 in New York.
- In 1920, was elected as the President of All India Trade Union Congress.
- In 1928, moved a resolution in the assembly refusing cooperation with the Simon Commission as it has no Indian members.

### **Contributions - Social**

- Founded Hindu Relief movement in 1897.
- Founded Servants of People Society in 1921.
- Contributions - Literary
- Books written by Him -
- The Story of My Deportation, 1908.
- Arya Samaj, 1915.
- The United States of America: A Hindu's Impression, 1916. The problem of National Education in India, 1920 Unhappy India, 1928.
- England's Debt to India
- The Story of My Deportation, 1908.
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- The United States of America: A Hindu's Impression, 1916.
- The problem of National Education in India, 1920 Unhappy India, 1928.
- England's Debt to India

### **Contributions - Literary**

- Founded Arya Gazette as its editor and regularly contributed to major Hindi, Punjabi, English and Urdu Newspapers.
- Autobiographical Writing -
  - ✓ Young India: An Interpretation and a History of the Nationalist Movement from Within.
- He also wrote biographies of Mazzini, Garibaldi, Shivaji, and Srikrishna.

### **Death**

- 1928, while protesting against the Simon Commission in Lahore, He was brutally lathi-charged by Superintendent of Police, James Scott and thus dies of injuries few weeks later.
- He remarked - "I declare that the blows struck at me today will be the last nails in the coffin of British rule in India"

## 3. Polity & Governance

### 3.1. Socially and Educationally Backward Class Reservation

#### Marathas Issue of Sub-Categorisation

- A five judge Constitutional Bench on challenging the validity of the Maharashtra State Reservation for Socially and Educationally Backward Classes (SEBC) Act, which had extended a 16% reservation for the Maratha community declared the Maratha Community to be socially and politically dominant.

#### What is a Constitutional Bench?

- Constitution bench is the name given to the benches of the Supreme Court of India which consist of at least five judges of the court which sit to decide any case "involving a substantial question of law as to the interpretation" of the Constitution of India or "for the purpose of hearing any reference" made by the President of India under Article 143.
- The provision for a constitutional bench has been mandated by Article 145 (3) of the Constitution of India. The Chief Justice of India has the power to constitute a Constitution Bench and refer cases to it.
- The bench refuted the findings of 2018 report of the M.G. Gaikwad Committee and pointed that almost 40% MPs and MLAs of Maharashtra are from this community.
- The M.G. Gaikwad Committee was the 11 member Maharashtra Backward Classes Commission headed by Justice (retd.) Gaikwad that declared Maratha class of citizens as socially and educationally backward class, entitled to benefits and advantages enshrined in Article 15 (4) and 16(4) of Indian Constitution.
- The bench had earlier also decided to hear all States in the matter, after a question of whether the Indra Sawhney case should be reconsidered cropped up.

#### What is the Indira Sawhney case?

- The Indira Sawhney case also popularly known as the Mandal Judgment upheld 27% reservation for OBCs in public employment and education. It excluded those belonging to the "creamy layer" (the forward section of a backward class, above a certain income). At the same time, it underlined that at no point should the reservation exceed 50%.

#### Need for OBC sub-categorisation?

- In September 2020, a Constitution Bench of the Supreme Court reopened the legal debate on sub-categorisation of Scheduled Castes and Scheduled Tribes for reservations. The argument for sub-categorisation, is that it would ensure "equitable distribution" of representation among all OBC communities.
- To examine this, the Rohini Commission was constituted on October 2, 2017. The Rohini Commission operates out of an office at Vigyan Bhawan Annexue and its expenses are borne by the NCBC. In data of central jobs surveyed, the Commission pointed that 97% of all jobs and educational seats have gone to just 25% of all sub-castes classified as OBCs.

## 4. Economy

### 4.1. Prompt Corrective Action Framework (PCA)

#### Impact of PCA

- If PCA is triggered Banks are not allowed to renew or access costly deposits or take steps to increase their fee-based income.
- Banks will also have to launch a special drive to reduce the stock of NPAs and contain generation of fresh NPAs.
- They will also not be allowed to enter into new lines of business.
- RBI also imposes restrictions on the bank on borrowings from interbank market.

#### What are PCA Norms ?

- PCA norms allow the regulator to place certain restrictions such as halting branch expansion and stopping dividend payment.
- It can even cap a bank's lending limit to one entity or sector.
- Other corrective action that can be imposed on banks include special audit, restructuring operations and activation of recovery plan.
- Banks' promoters can be asked to bring in new management, too. The RBI can also supersede the bank's board.
- The PCA is invoked when certain risk thresholds are breached.

#### Three Risk Thresholds

- There are three risk thresholds which are based on certain levels of asset quality, profitability, capital and the like.
- The third such threshold, which is maximum tolerance limit, sets net NPA at over 12 per cent and negative return on assets for four consecutive years.

#### Two type of Restrictions

- There are two type of restrictions:
  - ✓ Mandatory
  - ✓ Discretionary
- Mandatory: Restrictions on dividend, branch expansion, directors' compensation.
- Discretionary: Restrictions could include curbs on lending and deposit.

#### RBI & Regulatory Trigger Points

- The Reserve Bank has specified certain regulatory trigger points, as a part of prompt corrective action (PCA) Framework, in terms of three parameters, i.e.
  - ✓ Capital to risk weighted assets ratio (CRAR)
  - ✓ Net non-performing assets (NPA)

✓ Return on Assets (RoA),

- For initiation of certain structured and discretionary actions in respect of banks hitting such trigger points.

### Important Points

- The PCA framework is applicable only to commercial banks and not extended to co-operative banks, non-banking financial companies (NBFCs) and FMI.

<b>RISK THRESHOLDS AND CORRECTIVE ACTIONS</b>		
<b>RISK THRESHOLD 1</b>	<b>RISK THRESHOLD 2</b>	<b>RISK THRESHOLD 3</b>
<p><b>RESTRICTION ON DIVIDEND / DISTRIBUTION/REMITTANCE OF PROFITS.</b></p> <p><b>MORE CAPITAL TO BE BROUGHT IN BY OWNER / PROMOTERS IN CASE OF FOREIGN BANKS.</b></p> <p><b>DISCRETIONARY ACTIONS BY REGULATOR.</b></p>	<p><b>IN ADDITION OF ACTIONS UNDER RISK THRESHOLD 1,</b></p> <p><b>RESTRICTIONS ON BRANCH EXPANSION - DOMESTIC / OR OVERSEAS</b></p> <p><b>HIGHER PROVISIONS AS PART OF COVERAGE REGIME</b></p> <p><b>DISCRETIONARY ACTIONS BY REGULATOR.</b></p>	<p><b>RESTRICTIONS ON DIVIDEND,</b></p> <p><b>RESTRICTIONS ON BRANCH EXPANSION.</b></p> <p><b>RESTRICTIONS ON MANAGEMENT COMPENSATION AND DIRECTOR'S FEES.</b></p> <p><b>DISCRETIONARY ACTIONS BY REGULATOR.</b></p>

## 5. Environment & Ecology

### 5.1. World Water Day

#### Introduction

- To focus on the importance of freshwater, the United Nations marks March 22 every year as World Water Day.
- The theme of World Water Day 2021 is “Valuing Water”.
- It celebrates water and raises awareness of the 2.2 billion people living without access to safe water.
- A core focus of World Water Day is to support the achievement of Sustainable Development Goal 6: water and sanitation for all by 2030.

#### Theme

- Valuing Water.
  - ✓ The value of water is about much more than its price – water has enormous and complex value for our households, food, culture, health, education, economics and the integrity of our natural environment.
  - ✓ If we overlook any of these values, we risk mismanaging this finite, irreplaceable resource.

#### Celebrated Why?

- As per the UN website, the idea for this international day goes back to 1992, the year in which the United Nations Conference on Environment and Development in Rio de Janeiro took place.
- That same year, the United Nations General Assembly adopted a resolution by which March 22 of each year was declared World Day for Water, to be observed starting in 1993.
- Later on, other celebrations and events were added.
- For instance, the International Year of Cooperation in the Water Sphere 2013, and the current International Decade for Action on Water for Sustainable Development, 2018-2028.
- These observances aim to highlight that water and sanitation measures are key to poverty reduction, economic growth, and environmental sustainability.

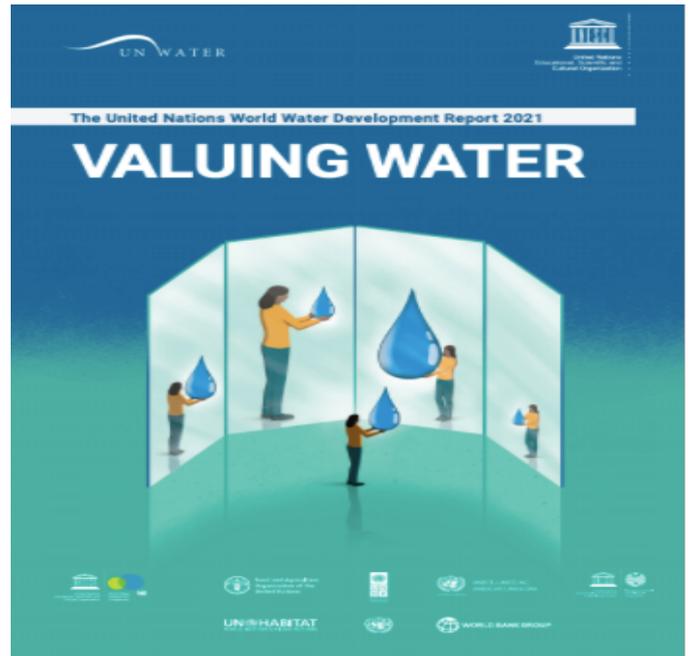
#### India

- In 2017, the average annual per capita water availability fell from 1820 cubic meters assessed in 2001 to 1545 cubic meters in 2011, and could reduce further to 1341 and 1140 in the years 2025 and 2050 respectively.
- Annual per-capita water availability of less than 1700 cubic meters is considered as water stressed condition, whereas annual per- capita water availability below 1,000 cubic meters is considered as a water scarcity condition.
- Due to high temporal and spatial variation of precipitation, the water availability of many regions of the country is much below the national average and can be considered as water stressed/water scarce,.

- In a 2018 report, the water and sanitation advocacy group WaterAid ranked India at the top of 10 countries with the lowest access to clean water close to home, with 16.3 crore people not having such access.
- The same report also took note of government efforts, saying, “(India) is also one of the world’s most-improved nations for reaching the most people with clean water, but faces challenges with falling groundwater levels, drought, demand from agriculture and industry, pollution and poor water resource management – challenges that will intensify as climate change contributes to more extreme weather shocks.”

## Water In The Constitution

- Under Article 246, the Indian Constitution allocates responsibilities of the States and the Centre into three lists– Union List, State List, and Concurrent List.
- As most of the rivers in the country are inter-State, the regulation and development of waters of these rivers, is a source of inter-State differences and disputes.
- In the Constitution, water is a matter included in Entry 17 of List-II i.e. State List.
- This entry is subject to the provision of Entry 56 of List-I i.e. Union List.



## UN WWDR 2021

- On World Water Day, 22 March, the UN World Water Development Report 2021 on 'Valuing Water' was launched.

## India

- India uses the largest amount of groundwater - 24% of the global total.
- India is the third largest exporter of virtual water ( groundwater that is used to grow export- oriented, water-intensive crops) -12% of the global total.

## Catch The Rain Campaign

- Prime Minister has launched 'Jal Shakti Abhiyan - Catch the Rain' campaign for conserving water and stressed that every penny of MGNREGA funds be spent on rain water conservation till the monsoon arrives.
- The 'Catch the Rain' campaign will be undertaken across the country, in both rural and urban areas.
- It will be implemented from March 22 to November 30 - the pre- monsoon and monsoon period in the country.
- The campaign aims to take water conservation at grass-root level through people's participation.
- It is intended to nudge all stakeholders to create rainwater harvesting structures suitable to the climatic conditions and subsoil strata, to ensure proper storage of rainwater.

## 6. Science & Technology

### 6.1. Doppler Weather Radar



- Since this time, the modern weather radar has evolved and improved a great deal, incorporating better data retrieval methods and higher resolution data.
- In fact, most modern weather radars are now pulse-Doppler radars, and are capable of detecting the motion of rain droplets in addition to the intensity of the precipitation.
- Context: Union Ministry for Earth Sciences commissioned two of the ten indigenously built Doppler weather radars which will closely monitor the weather changes over the Himalayas.
- Services of X-band Doppler radars at Mukteshwar in Uttarakhand and Kufri in Himachal Pradesh were virtually inaugurated on the 146th foundation day of the India Meteorological Department (IMD).
- Covering the central and western Himalayas, these dual polarised radars will gather atmospheric variations and pick signals of extreme weather events.
- Both Uttarakhand and Himachal Pradesh are highly prone to cloud bursts, landslides, heavy rain and snowfall. Timely weather forecasts and warnings would ensure the governments make advance plans and initiate rescue measures.

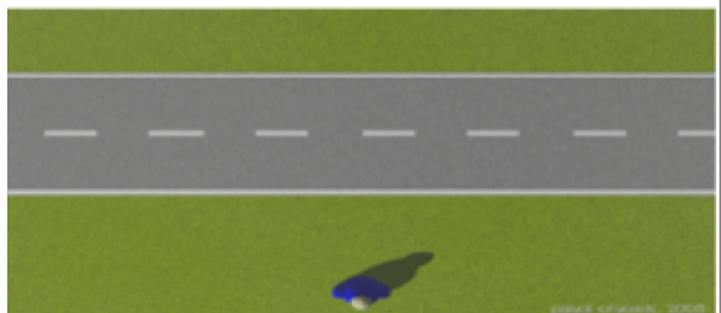
#### How radar works?

- The basics of radars is that a beam of energy, called radio waves, is emitted from an antenna. As they strike objects in the atmosphere, the energy is scattered in all directions with some of the energy reflected directly back to the radar.
- The larger the object, the greater the amount of energy that is returned to the radar. That provides us with the ability to "see" rain drops in the atmosphere.

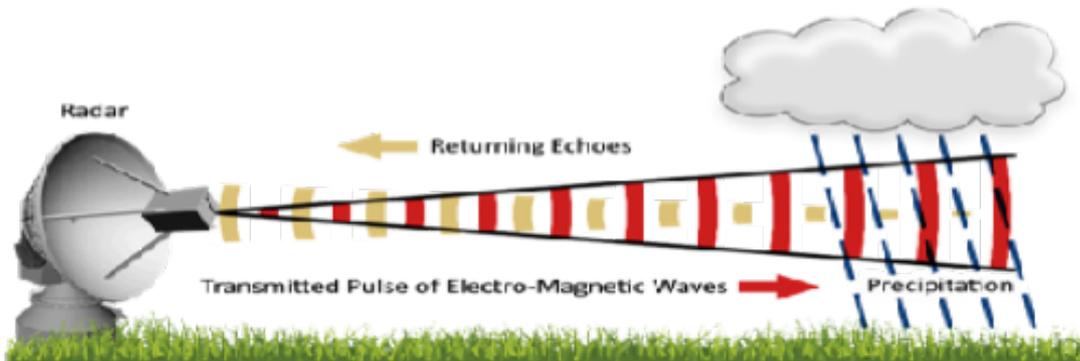


#### Doppler Radar

- Doppler radar systems can provide information regarding the movement of targets as well as their position.
- Doppler Effect: The Doppler effect is the change in frequency of a wave in relation to an observer who is moving relative to the wave source.



- By measuring the shift (or change) in phase between a transmitted pulse and a received echo, the target's movement directly toward or away from the radar is calculated.
- This then provides a velocity along the direction the radar is pointing, called radial velocity.
- A positive phase shift implies motion toward the radar and a negative shift indicates motion away from the radar.

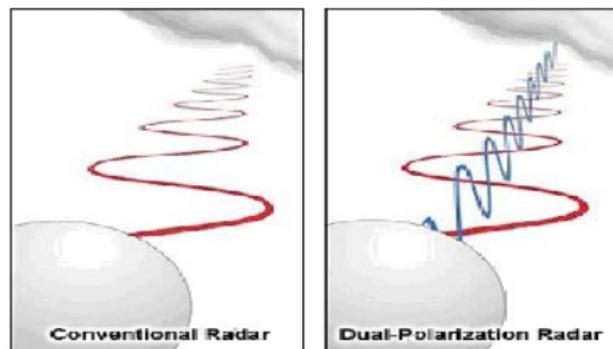


### Types of Radar

- Doppler radar can be divided into several different categories according to the wavelength of the radar. The different bands are L,S,C,X,K. The names of the radars originate from the days of WWII.
- X band radars operate on a wavelength of 2.5-4 cm and a frequency of 8-12 GHz. Because of the smaller wavelength, the X band radar is more sensitive and can detect smaller particles.
- These radars are used for studies on cloud development because they can detect the tiny water particles and also used to detect light precipitation such as snow.

### Dual-Polarized Radar

- While conventional radars emit and receive pulses in the horizontal direction, dual-polarization radars go a step further and transmit and receive waves in the horizontal and in the vertical direction.
- This provides a more complete picture of targets in the atmosphere, allowing forecasters to differentiate between rain, snow/melting snow, and even hail.



NOAA