

### 2024 Nobel Chemistry Prize to David Baker, Demis Hassabis & John Jumper



#### Key Points:

- ❖ The Royal Swedish Academy of Science, Stockholm, has chosen David Baker, Demis Hassabis, and John M. Jumper for the 2024 Nobel Prize in Chemistry. American David Baker was honoured for his work on 'computational protein design'.
- ❖ British Demis Hassabi and American John M. Jumper were honoured for their work in predicting protein structures from their amino acid sequences.
- ❖ **Work of the Three Nobel Prize-Winning Scientists**
- ❖ Proteins, made of amino acids, are the building blocks of life. They control and drive all chemical reactions in human beings and function as hormones, antibodies, and signal substances. Proteins normally consist of 20 different types of amino acids called lifebuilding blocks.
- ❖ In 2013, David Baker succeeded in designing a new type of protein that was unlike any other protein.
- ❖ In 2020, Demis Hassabis and John Jumper developed an AI (artificial intelligence) model called AlphaFold2, which predicts the structure of virtually all the 200 million proteins known to humans.
- ❖ Their work has many scientific applications, such as a better understanding of antibiotic resistance and the creation of images of enzymes that can decompose plastic.

#### Nobel Prize in Chemistry

- ❖ The Nobel Prize in Chemistry was instituted by the Nobel Foundation in 1900 and was first awarded in 1901.
- ❖ The first person to receive the prize was Jacobus Henricus van 't Hoff of the Netherlands in 1901.
- ❖ The Chemistry Nobel Prize has been awarded twice to two persons. Frederick Sanger of England was awarded the prize in 1958 and 1980, and Barry Sharpless of the United States of America was awarded it in 2001 and 2022
- ❖ Madame Marie Curie was the first woman to be awarded the Nobel Prize in Chemistry in 1911 for discovering polonium and radium.

#### Why was Mahatma Gandhi never awarded the Nobel Peace Prize?

- ❖ Mahatma Gandhi, widely regarded as one of the great champions of non-violent struggle, has never won the Nobel prize for Peace. He was selected five time, in 1937, 1938, 1939, 1947, and 1948. But he has never won it.
- ❖ The omission has been publicly regretted by later members of the Nobel Committee. For example, when Dalai Lama was awarded the Peace Prize in 1989, the chairman of the committee said it was "in part a tribute to the memory of Mahatma Gandhi.

#### Reasons for not winning

- ❖ There are several questions that have been asked frequently when Mahatma Gandhi is considered. The common questions include "Was the horizon of the Norwegian Nobel Committee too narrow", "Were the members unable to appreciate the struggle for freedom among non-European people", "Were they perhaps afraid to make a prize award which might be detrimental to the relationship between Norway and Great Britain".

- ❖ With that in mind, here are some reasons people of the committee have said regarding why Gandhi never won the prizes

### Reasons for not winning

- ❖ Up to 1960, the Nobel Peace Prize was awarded almost exclusively to Europeans and Americans. In retrospect, the horizon of the Norwegian Nobel Committee may seem too narrow. Gandhi was very different from earlier Laureates.
- ❖ Gandhi was too much of an Indian nationalist. One might say that it is significant that his well-known struggle in South Africa was on behalf of the Indians only, and not of the blacks whose living conditions were even worse.
- ❖ Last, but not least, while the committee considered giving him a posthumous award after his passing, the explanation was that there "Gandhi did not belong to an organization, he left no property behind, and no will. So, who should receive the Prize money"?

### Health Minister JP Nadda announces enhanced nutrition support for TB patients



### Key Points:

- ❖ Union Health Minister JP Nadda has announced several key initiatives aimed at enhancing nutrition support for TB patients and their household contacts.
- ❖ The monthly nutrition support under Ni-kshay Poshan Yojana has been doubled from the existing 500 rupees to 1000 rupees for all TB patients during the period of treatment.

- ❖ The government has also decided to introduce energy-dense nutrition supplementation for all patients with BMI less than 18.5.
- ❖ Ni-kshay Mitras will now provide food baskets to the household contacts of TB patients to improve their immunity.
- ❖ This initiative is expected to significantly reduce out-of-pocket expenses incurred by TB patients and their families. 3,202 crore rupees have been disbursed to 1.13 crore beneficiaries through Direct Benefit Transfer under the Nikshay Poshan Yojana.
- ❖ The government also decided to permit expansion of scope and coverage of Ni-Kshay Mitra initiative under Pradhan Mantri TB Mukh Bharat Abhiyaan (PMTBMBA) including the family members of TB patients. All TB patients will now receive nutritional support of 3,000 rupees to 6,000 rupees under Ni-Kshay Poshan Yojana (NPY). The enhancement of NPY support will benefit all 25 lakh TB patients annually and the introduction of Energy Dense Nutritional Supplementation (EDNS) would cover approximately 12 lakh underweight patients.
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**Government extends tenure of RBI Deputy Governor for 1 year**



**Key Points:**

- ❖ The Central Government has extended the tenure of Mr M. Rajeshwar Rao as Deputy Governor, Reserve Bank of India with effect from the 9th of October. 2024.
- ❖ The extension is for one year or until further orders, whichever is earlier. This is the second one-year extension for Mr Rao, who was initially appointed as Deputy Governor in October 2020 for three years.
- ❖ Mr. Rao will continue to look after the Department of Regulation, Department of Communication, Enforcement Department, Legal Department and Risk Monitoring Department.

**King of Clay ‘Rafael Nadal’ announces retirement from Tennis**



**Key Points:**

- ❖ One of the greatest men’s tennis players in the open era, Rafael Nadal, has announced his retirement from professional tennis.
- ❖ The upcoming Davis Cup Final in Spain will be his last tournament as a professional player.

- ❖ The 2024 Davis Cup Final will take place from 19 to 24 November 2024 in Malaga, Spain.
- ❖ Rafael Nadal will be part of the Spanish team that will take on the Netherlands in the quarter-finals on 19 November 2024.
- ❖ Rafel Nadal made the announcement about his retirement on his social media channel on 10th October 2024. Rafael Nadal also has an Indian connection.
- ❖ In 2010, he opened the Rafael Nadal Tennis School at Anantapur, Andhra Pradesh. The school teaches sports, mathematics, English, and Information Technology to dropout students and also provides good health care and nutrition support to 150 students every year.

**One of the Modern Greats of Tennis**

- ❖ Rafael Nadal, Roger Federer, and Novak Djokovic were the famous “ big three” in professional tennis, and they had dominated the sport for over two decades.
- ❖ Spanish-born Rafael Nadal turned professional in 2001 at the age of 15 and became the youngest male player to win a match in the professional tennis circuit.
- ❖ Rafael Nadal, affectionately known as Rafa, was an excellent player on the clay court. He was the master of the French Open, which is played on clay.
- ❖ He won a record 14 singles titles at the French Open, earning him the nickname of ‘King of Clay’.

**List of achievements of Rafael Nadal**

- ❖ During his stellar career, Rafael Nadal has won several tennis titles.
- ❖ 22 Grand Slam singles titles: 14 French Open, 4 US Open, 2 Wimbledon, 2 Australian Open. Olympic Medals: 2 gold medals.
- ❖ Singles gold medal at the 2008 Beijing Olympics and gold in the men’s double at the 2016 Rio Olympics.

- ❖ ATP No.1 Player: He was the ATP World No.1 ranked player for five years-2008, 2010, 2013, 2017 and 2019.
- ❖ He won 92 ATP titles and was the number-one ranked player for 209 weeks Davis Cup: He has been part of the Spanish Davis Cup-winning team on five occasions: 2004, 2008, 2009, 2011, and 2019.

**Argentinan Foreign Minister Diana Mondino concludes her India visit**



**Key Points:**

- ❖ Argentina's Minister for Foreign Affairs, International Trade and Worship, Ms Diana Mondino, concluded her five-day official visit to India.
- ❖ During her visit to India from 5-9 October 2024, she met External Affairs Minister Dr S. Jaishankar, Union Minister for Petroleum and Natural Gas Hardeep Singh Puri and Union Minister for Commerce and Industry Piyush Goyal.
- ❖ Diana Mondina's visit coincides with the 75th anniversary of the establishment of diplomatic relations between the two countries.
- ❖ India and Argentina enjoy close relationships, which were elevated to the level of a Strategic Partnership during Argentina's President Mauricio Macri's state visit to India in February 2019.

**7th India-Argentina Joint Commission Meeting**

- ❖ The 7th India-Argentina Joint Commission meeting, co-chaired by Dr S Jaishankar and Ms Diana Mondino, was held in New Delhi.

- ❖ Both leaders reviewed the bilateral relations and discussed increasing cooperation in defence, energy, space, nuclear, railways, infrastructure, healthcare, information technology, pharmaceuticals, education, agriculture, and mining.

**Argentina do not want to Join BRICS**

- ❖ Ms Diana Mondino also attended an interactive session organised by the Observer Research Foundation in New Delhi on 8 October.
- ❖ Speaking at the session, she said that Argentina is not interested in becoming a member of BRICS as it does not want to be part of any political agenda.
- ❖ In August 2023, during the BRICS summit in Johannesburg, South Africa, Argentina joined Saudi Arabia, Iran, UAE, Ethiopia, and Egypt as the new members of the BRICS.
- ❖ However, after the election of Javier Milei as the President, Argentina refused to join BRICS.

**Uttarakhand to host next Summer and Winter National Games**



**Key Points:**

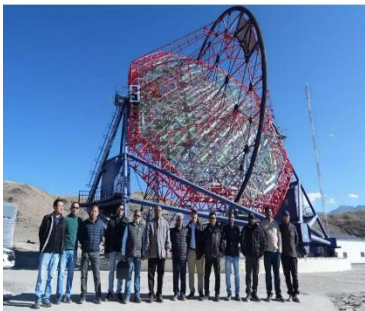
- ❖ The Indian Olympic Association has chosen Uttarakhand to host the 38th Summer National Games. The state will also hold the next Winter Games.
- ❖ The 37th National Games was held in Goa from 25 September -9 November 2023. The Winter Games will be held outside Jammu & Kashmir and Ladakh for the first time.
- ❖ According to the Indian Olympic Association, Uttarakhand will hold the 38th National Games from 28 January -14 February 2025.

- ❖ The details of the Game's venue, events, and other schedules are expected to be finalised during the Indian Olympic Association's (IOA) General Assembly meeting on October 25, 2024.

### About the National Games

- ❖ The National Games are organised by the Indian Olympic Association and hosted by the state government.
- ❖ Their main aim is to identify talents in the country who can represent India at the Summer Olympics.
- ❖ The National Games are held on the Olympic model and were initially supposed to be held every two years.
- ❖ Until the 24th National Games, they were held every two years, but since then, they have been held irregularly.
- ❖ The first National Games, held in 1924 at Lahore (now in Pakistan), was called the All-India Olympic Games.
- ❖ The name was changed to National Games at the 9th edition in Bombay (now Mumbai) in 1940.

### DAE inaugurates MACE, Asia's Largest and World's Highest Imaging Cherenkov Observatory, at Hanle Ladakh



#### Key Points:

- ❖ The Major Atmospheric Cherenkov Experiment (MACE) Observatory was inaugurated by Dr. Ajit Kumar Mohanty, Secretary DAE & Chairman of the Atomic Energy Commission, at Hanle, Ladakh. MACE is the largest imaging Cherenkov telescope in Asia.

- ❖ Located at an altitude of ~4,300 m, it is also the highest of its kind in the world.
- ❖ The telescope is indigenously built by BARC with support from ECIL and other Indian industry partners.
- ❖ The inaugural of MACE Observatory was a part of the Platinum Jubilee year celebrations of the DAE.
- ❖ The MACE Observatory is a monumental achievement for India, placing our nation globally at the forefront of cosmic-ray research.
- ❖ This telescope will allow us to study high-energy gamma rays, paving the way for deeper understanding of the universe's most energetic events.

### GRSE delivers second survey vessel INS Nirdeshak to Indian Navy



#### Key Points:

- ❖ Defence PSU Garden Reach Shipbuilders and Engineers (GRSE) Ltd delivered survey vessel INS Nirdeshak to the Indian Navy.
- ❖ INS Nirdeshak is the second in a series of four such vessels being constructed by GRSE, with the first delivered to the Navy 10 months ago in December 2023.
- ❖ These are the largest survey vessels for the Indian Navy to be built in the country.
- ❖ At 110 metres long, INS Nirdeshak will join INS Sandhayak, the first Survey Vessel Large (SVL) delivered by GRSE, to keep the country's naval forces equipped with the latest survey data, which is essential for operations.

- ❖ The Sandhayak-class SVLs can undertake surveys of maritime limits and collect oceanographic and geographical data for defence applications, which adds muscle to India's maritime capabilities.

**IFC partners with Axis Bank to provide \$500 million climate loan in India**



**Key Points:**

- ❖ The International Finance Corporation (IFC) has partnered with Axis Bank to provide a \$500 million loan to help develop a blue finance market and scale up financing of green projects in India.
- ❖ This is IFC's first blue investment in India and the first blue transaction by a financial institution in the country.
- ❖ Blue loans are financing instruments that raise and earmark funds for investments such as water and wastewater management, reduction of marine plastic pollution, restoration of marine ecosystems, sustainable shipping, eco-friendly tourism, and offshore renewable energy.

**Recent MoUs Signed in Banking Sector**

- ❖ NCRTC and Airtel Payments Bank Launch Co-Branded National Common Mobility Cards to Enhance Commuter Convenience
- ❖ Federal Bank join hands with Bhashini to boost Chatbot Feddy with Vernacular Language Support
- ❖ Bandhan Life partners with Bandhan Bank to Strengthen Insurance Business
- ❖ SBI General Insurance joins hand with BLS E-Services to Streamline Access to Insurance Across India

- ❖ ICICI Bank partners with PFRDA to launch NPS Vatsalya, a pension account for minors

**India's Prasanth Kumar re-elected as president of AAI**



**Key Points:**

- ❖ GroupM Media India, the Indian arm of the USbased media investment group's chief executive officer (CEO) – South Asia, Prasanth Kumar, has been re-elected as the president of the Advertising Agencies Association of India (AAAI) for the year 2024-25.
- ❖ The AAI is a not-for-profit, industry-led and industry-managed trade association of advertising agencies, formed in 1945.
- ❖ Prasanth Kumar is a GroupM veteran with over two decades of experience in advertising, having worked in other organisations as well. He has previously worked at Pepsi, The Hindu, The Media Edge, and McCann Erickson before joining GroupM. He also served as vice-president of AAI during 2020-22.

**Air Marshal SP Dharkar appointed as the next IAF Vice Chief**



**Key Points:**

- ❖ Air Marshal SP Dharkar, a distinguished fighter pilot, has been appointed as the next Vice Chief of Air Staff.

- ❖ He will succeed Air Marshal AP Singh, who is set to become the Chief of Air Staff. With more than 3,600 flying hours, Air Marshal Dharkar brings extensive experience to the position.
- ❖ He is an alumnus of the Rashtriya Indian Military College in Dehradun, the National Defence Academy in Pune, the Defence Services Staff College in Wellington, and the Air War College in the United States.

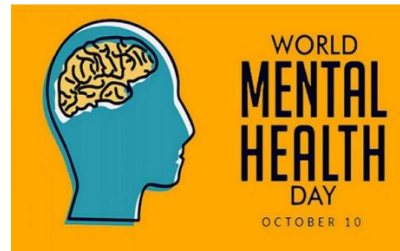
**PM Modi laid foundation stone for various development projects in Maharashtra worth over Rs 7600 crore**



**Key Points:**

- ❖ The Prime Minister, Narendra Modi laid the foundation stone for various development projects in Maharashtra worth over Rs 7600 crore via video conference.
- ❖ The projects include the foundation stone laying of the upgradation of Dr Babasaheb Ambedkar International Airport, Nagpur with a total estimated project cost of around Rs 7000 crore.
- ❖ The Prime Minister laid the foundation stone for the New Integrated Terminal Building at Shirdi Airport worth over Rs 645 crore. It will provide world-class facilities and amenities for the religious tourists coming to Shirdi.

**10 October – World Mental Health Day**



**Key Points:**

- ❖ World Mental Health Day is observed every year on October 10. This day aims to increase understanding, dispel misconceptions, and encourage mental wellness support.
- ❖ Theme 2024 – Mental Health At Work World Mental Health Day was founded in 1992 by the World Federation for Mental Health (WFMH), led by Deputy Secretary General Richard Hunter.
- ❖ This was first observed on October 10th when 12 countries participated.
- ❖ The goal of this day is to spread awareness, reduce stigma related to mental health and mobilise global support

**World Habitat Day**



**Key Points:**

- ❖ World Habitat Day is celebrated every year on the first Monday of October.
- ❖ This year it was celebrated on 7 October.
- ❖ The day serves as a powerful reminder that everyone has the right to a decent and safe place to live.
- ❖ **Theme 2024 – Engaging youth to build a better urban future**

### World Post Day



#### Key Points:

- ❖ World Post Day is celebrated annually on October 9 to highlights the significant role of the postal system in daily life, global communication, and economic development.

- ❖ This year marks the 150th anniversary of the Universal Postal Union (UPU), established in 1874 in Bern, Switzerland, which paved the way for modern international mail exchange.
- ❖ Theme 2024 – 150 years of enabling communication and empowering peoples across nations.

