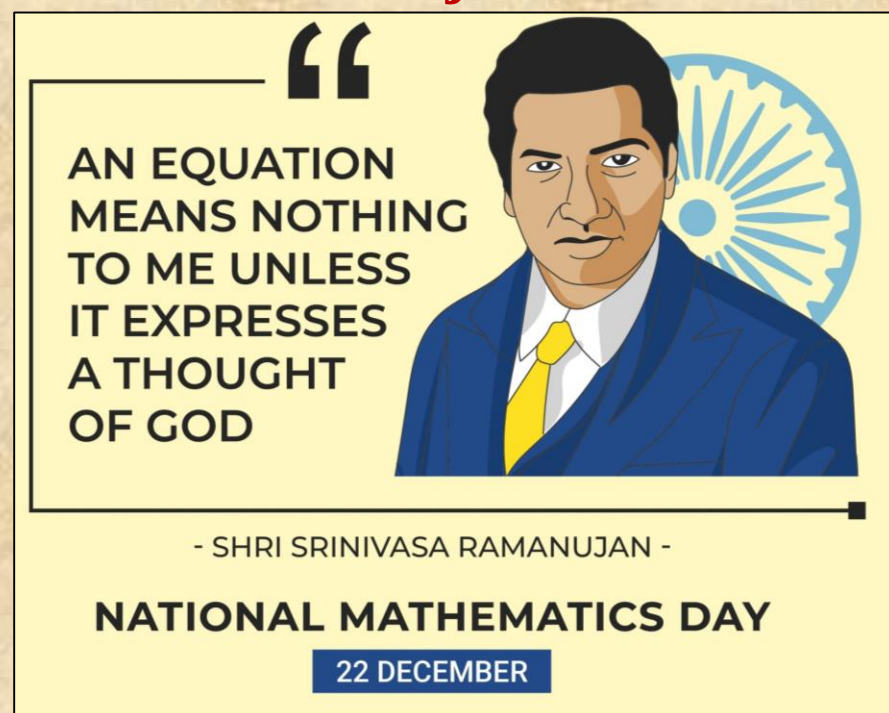


National Mathematics Day in Honour of Srinivasa Ramanujan

- Every year, on December 22, India observes its National Mathematics Day in honour of Srinivasa Ramanujan (1887-1920), regarded as one of the greatest mathematicians to ever grace the planet.

❖ About S Ramanujan

- ❑ Born in the town of Erode in Madras Presidency (now Tamil Nadu), Ramanujan came from humble origins.
- ❑ He was a sickly child, contracting and somewhat miraculously surviving — smallpox at the age of 2. But even as a child, his mathematical aptitude was apparent.
- ❑ By the age of 14, he was completing mathematics examinations in half the allotted time, and exploring complex topics way beyond the capability of an average 14-year old.
- ❑ He was unable to graduate with a Fellow of Arts degree, and was left with abysmal job prospects and dire poverty, with mathematics his only refuge.
- ❑ In 1912, V Ramaswamy Iyer, founder of the Indian Mathematical Society, helped him get a clerical position at the Madras Port Trust.
- ❑ Ramanujan sent his mathematical work to British mathematicians, and in 1913, GH Hardy responded, impressed by his theorems and work on infinite series.
- ❑ Hardy invited Ramanujan to London, and in 1914, with Hardy's assistance, he enrolled at Trinity College, Cambridge.
- ❑ In 1917, Ramanujan was elected to be a member of the London Mathematical Society.
- ❑ In 1918, he also became a Fellow of the Royal Society, becoming one of the youngest to ever achieve the feat.
- ❑ His work in number theory is especially regarded, and he made advances in the partition function.
- ❑ Ramanujan was recognised for his mastery of continued fractions, and had worked out the Riemann series, elliptic integrals, hypergeometric series, and the functional equations of the zeta function.
- ❑ In 2012, then Prime Minister Manmohan Singh declared December 22 as National Mathematics Day in honour of the great man.

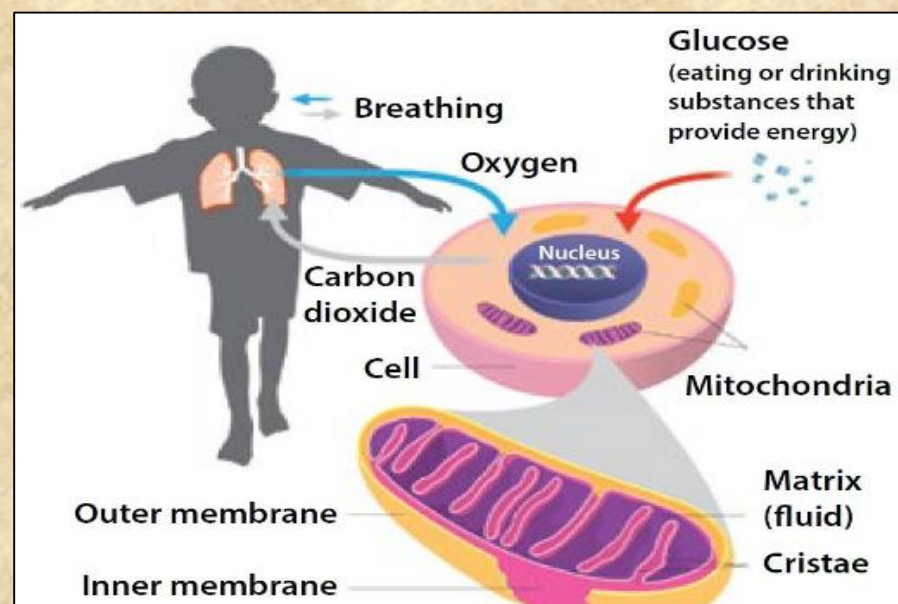
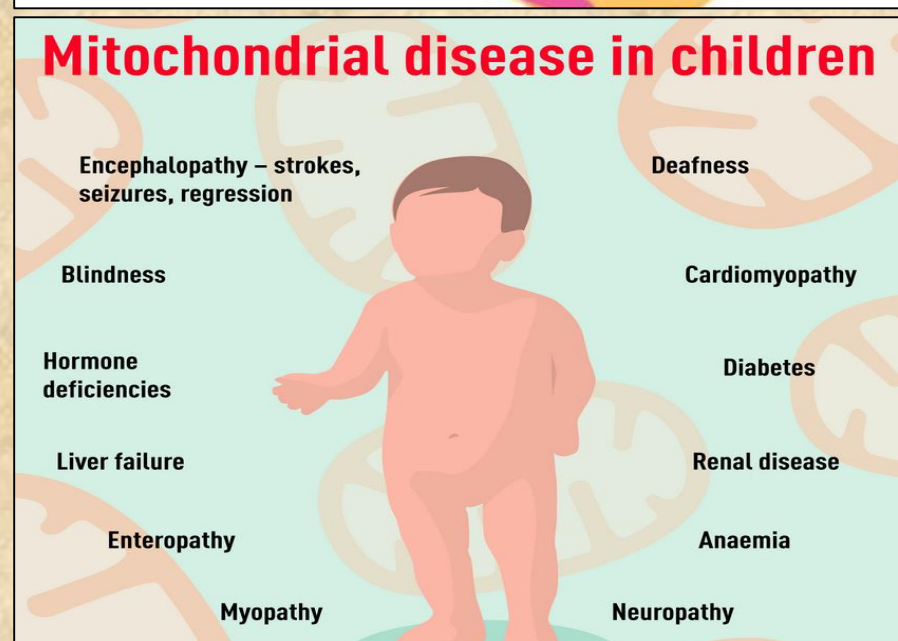


Mitochondrial Diseases

- Recently, researchers found about a quarter of mitochondrial disease patients suffer from malnutrition.

❖ About Mitochondrial Diseases

- ❑ Mitochondria are basically the **powerhouses of the cells**, they generate the energy, and thus are also responsible for cell function in the human body.
- ❑ Certain defects might occur impacting on the way the mitochondria produces energy for the cells.
 - Specially in the ‘energy-hungry’ tissues of the brain, nerves, muscles, kidneys, heart, liver), and thereby impacting cell function.
- ❑ The diseases that arise out of such mitochondrial mutations are called **mitochondrial diseases**.
- ❑ When the mitochondria are impaired and do not produce sufficient energy, that affects how the organs function, leading to a broad assortment of symptoms across the body, including brain damage, organ failure and muscle wastage.
- ❑ The symptoms get more and more debilitating as a child grows, and have no cure, but can be treated.
- ❑ Some estimates put the incidence of mitochondrial diseases as one in 5000 people.



Major Dhyan Chand Khel Ratna Award

- Recently, India's badminton stars Chirag Shetty and Rankireddy Satwik Sai Raj won the Major Dhyan Khel Ratna award.

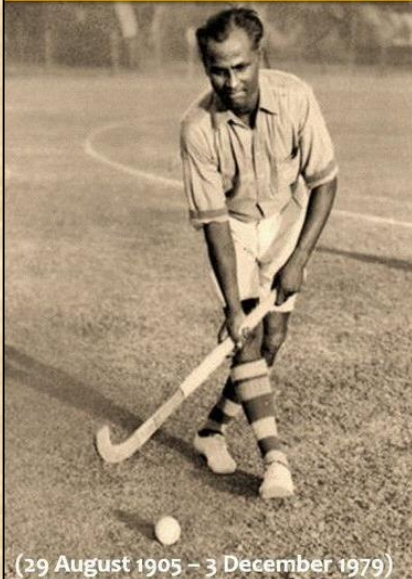
❖ Key Highlights

- ❑ Ministry of Youth Affairs and Sports announced the National Sports Awards 2023.
- ❑ Based on the recommendations of the Committee and after due scrutiny, the government decided to confer awards upon sportspersons, coaches and entities.
- ❑ The awardees will receive their awards from the President of India at a specially organised function at Rashtrapati Bhavan on January 9, 2024.

❖ About the Award

- ❑ Major Dhyan Chand Khel Ratna Award is given to sportspersons with spectacular and most outstanding performance in the field of sports over the course of last four years.
- ❑ It is awarded annually by the Ministry of Youth Affairs and Sports, Government of India.
- ❑ The award since August 6, 2021 is named after Major Dhyan Chand (1905–79).
 - He was an Indian field hockey player, widely regarded as one of the greatest field hockey players of all time, who scored more than 1000 goals over a career that spanned over 20 years from 1926 to 1948.
- ❑ The award comprises a medallion, a certificate, and a cash prize of ₹25 lakh.
- ❑ Vishwanathan Anand was the first winner of this award in 1991-92 for his exceptional performance in Chess.
- ❑ Among cricketers, Sachin Tendulkar was the first player to be conferred with the Khel Ratna while MS Dhoni, Virat Kohli, Rohit Sharma and Mithali Raj have been the others to win it.

MAJOR DHYAN CHAND



Fondly called “The Wizard of Hockey”, Dhyan Chand in his lifetime scored over 400 goals and led India to Olympic GOLD in 1928, 1932 and 1936.

Authorities in Netherland once broke open his hockey stick to check it had magnet in it.

National Stadium in Delhi was renamed to Dhyan Chand National Stadium in 2002.

Dhyan Chand has scored over 400 goals in his career spanning 22 years (1926-48).

The country instituted the highest Award for lifetime achievement in Sports in his name.

(29 August 1905 – 3 December 1979)

UNESCO's Prix Versailles Award

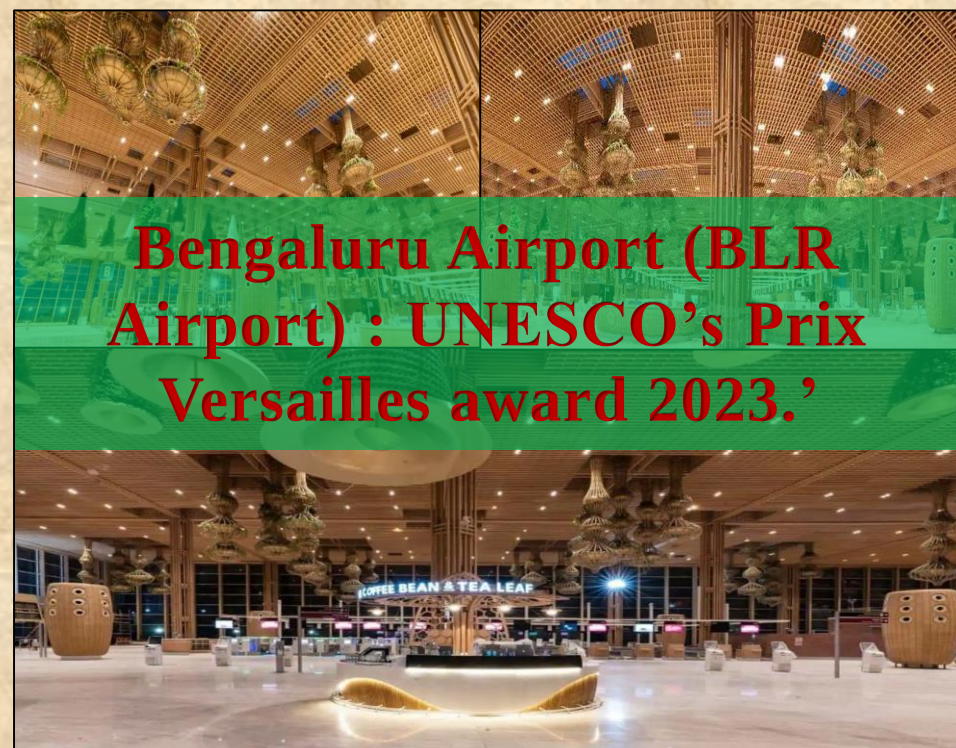
- The Kempegowda International Airport aka Bengaluru Airport (BLR Airport) Terminal 2 has been awarded UNESCO's Prix Versailles award for 'World Special Prize for an Interior 2023.'

❖ Key Highlights

- ❑ Phase 1 Terminal 2 at Bangalore Airport was inaugurated on November 11, 2022, by Prime Minister Narendra Modi.
- ❑ Domestic flights started operating on January 15, 2023 and international flights started operating on September 12, 2023.
- ❑ The swanky terminal was built at a cost of around Rs 5,000 crore and is popularly being called the "Garden terminal" or the "Terminal in a garden".
- ❑ The new terminal's design honours the legacy and culture of Bengaluru which is also known as Garden city.
- ❑ It reflects new-age philosophies of sustainability and renewable energy, the use of future technologies, and a commitment to the city's historic tag of being “the garden city” of India.
- ❑ Terminal 2 had previously earned the prestigious IGBC platinum certification from the Indian Green Building Council under the IGBC Green New Building Rating system.

❖ About the Award

- ❑ The award recognises innovativeness, creativity, the reflection of local heritage and ecological efficiency.
- ❑ Announced each year at UNESCO since 2015, the Prix Versailles is a series of architectural competitions that shine a light on the finest contemporary projects worldwide.



Pradhan Mantri Anusuchit Jaati Abhuyday Yojana (PM- AJAY)

- Recently, the Union Minister of State for Social Justice and Empowerment informed the Rajya Sabha about the PM-AJAY scheme.

❖ Key Highlights

- ❑ Pradhan Mantri Anusuchit Jaati Abhuyday Yojana (PM-AJAY) is a merged Centrally Sponsored Scheme implemented since 2021-2022 with an aim to reduce poverty of the Scheduled Caste (SC) community.
- ❑ The 3 schemes were
 - Pradhan Mantri Adarsh Gram Yojana (PMAGY)
 - Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP)
 - Babu Jagjivan Ram Chhatrawas Yojana (BJRCY).

- ❑ The scheme is implemented through the Department of Social Justice and Empowerment under the Ministry of Social Justice and Empowerment (MoSJ&E).

❖ Objectives

- ❑ To reduce poverty of the SC communities by generation of additional employment through skill development, income generating schemes and other initiatives.
- ❑ To improve socio-economic developmental indicators by ensuring adequate infrastructure and requisite services in the SC dominated villages.
- ❑ To increase literacy and encourage enrolment of SCs in schools and higher educational institutions and offer residential schools in the aspirational districts/ SC dominated blocks.

❖ Eligibility Criteria

- ❑ The Scheduled Castes persons living below the poverty lines are eligible for getting benefits under this scheme.
- ❑ In case of Infrastructure Development, the villages having 50% or more SC population are eligible for grants under the Scheme.



Operation Prosperity Guardian

- Recently, the US has announced the creation of an enhanced naval protection force operating in the southern Red Sea in an attempt to ward off mounting attacks from Yemen's rebel Houthis on merchant shipping.

❖ Key Highlights

- ❑ The US said the new effort would be called Operation Prosperity Guardian and was necessary to tackle the "recent escalation in reckless Houthi attacks originating from Yemen".
- ❑ Other participants in the effort, Austin said, included Bahrain, Canada, France, Italy, the Netherlands, Norway, Seychelles and Spain.
- ❑ The coalition currently has more than 20 members.
- ❑ Egypt and Saudi Arabia, both economically reliant on unhindered commercial shipping in the area, are absent from the listed participants.
- ❑ Aside from the eleven listed coalition members, there are ten anonymous governments concealing their involvement.

❖ Background

- ❑ The operation aims to ensure the safety of maritime traffic in the Red Sea, Bab al-Mandeb and Gulf of Aden.
- ❑ Following the start of the 2023 Israel-Hamas war, multiple civilian container and freight ships were attacked and hijacked in the Gulf of Aden by Houthi forces.
- ❑ The attacks prompted most major shipping companies to divert their routes away from the Suez Canal.
- ❑ As of 21 December 2023, at least twelve civilian vessels have been attacked.
- ❑ The waterways to and from the Red Sea are shipping chokepoints for the global economy which connect the Mediterranean Sea with the Indian Ocean and the Suez Canal with the Horn of Africa.

:: END ::

