

National Science Day

Why In News

- Every year on **February 28th**, India celebrates National Science Day to commemorate the discovery of the Raman Effect by the renowned physicist Sir **Chandrasekhara Venkata Raman**, commonly known as CV Raman. This day serves as a reminder of his ground-breaking contributions to science and technology, leaving behind a legacy that continues to inspire generations worldwide.



History Of National Science Day

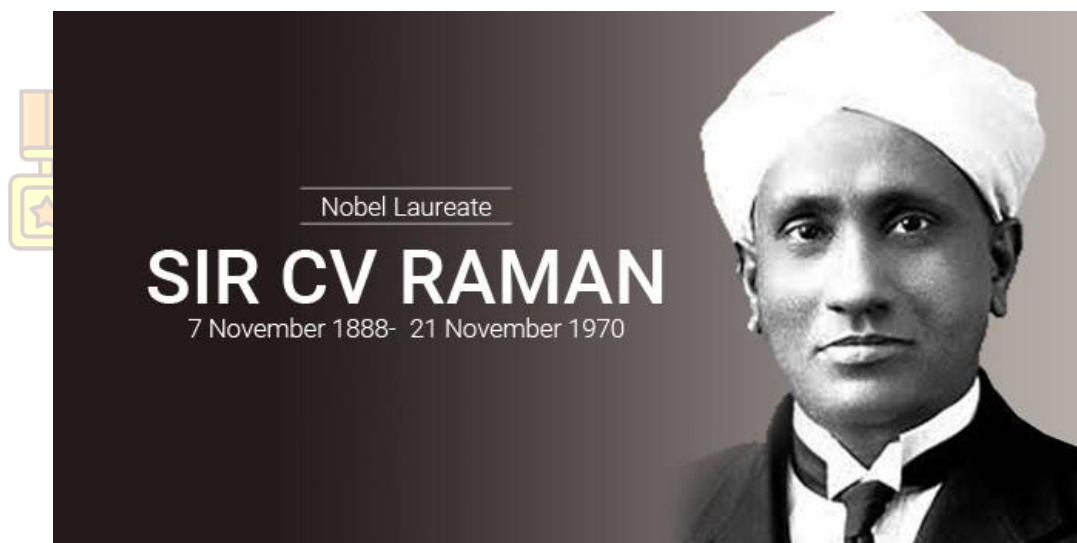
- On February 28, 1928, CV Raman announced the **discovery of the Raman Effect** and for it, he was awarded the **Nobel Prize in 1930**.



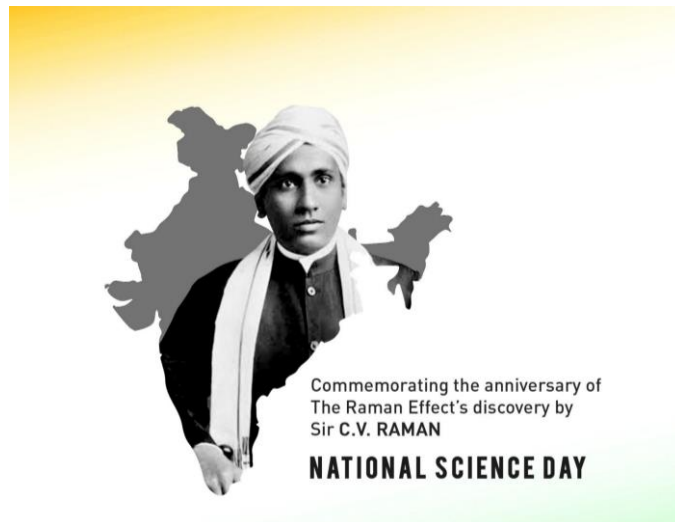
- The **National Council for Science and Technology Communication (NCSTC)**, in 1986, asked the Government of India to announce February 28 as National Science Day.
- The government accepted and declared the day as National Science Day. The first National Science Day was **celebrated on February 28, 1987**.
- The theme for this year's National Science Day celebration is "Indigenous Technologies for Viksit Bharat."

CV Raman

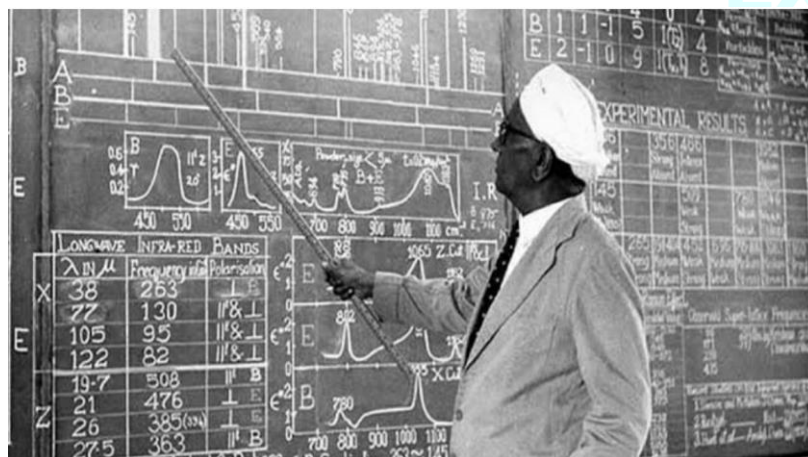
- **Born on November 7, 1888**, in the city of **Tiruchirappalli, Tamil Nadu, C.V.** Raman exhibited an early passion for science and education.
- His journey towards scientific excellence began with a **Bachelor's degree in Physics from Presidency College**, Chennai, followed by a Master's degree from the University of Calcutta.



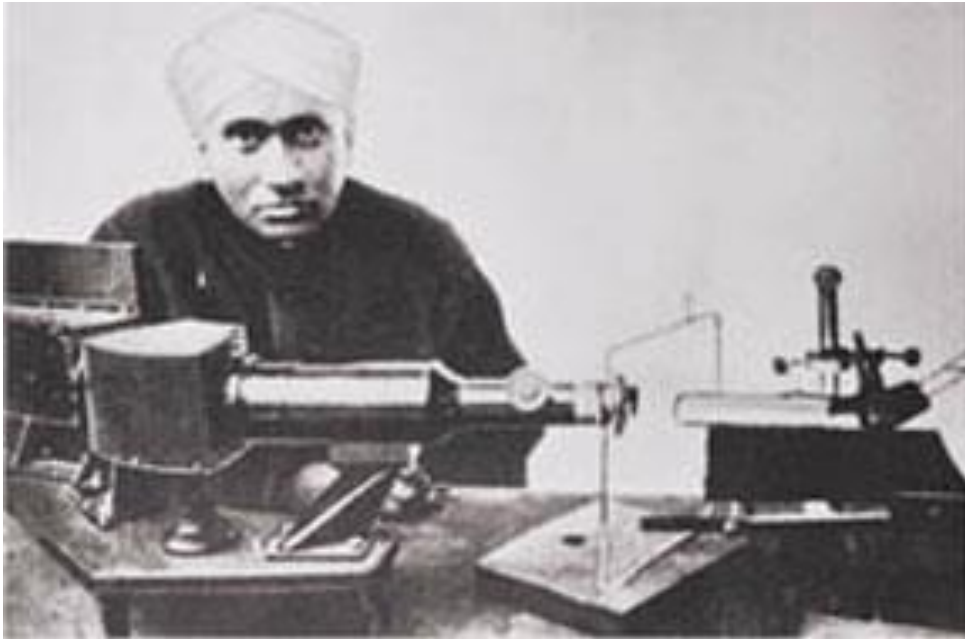
- It was during his tenure as a professor at the **Indian Association for the Cultivation of Science (IACS)** in Kolkata that Raman made his most significant breakthrough. In 1928, while conducting experiments on the scattering of light, he observed an unexpected phenomenon that would revolutionize the field of physics.
- This phenomenon, **known as the Raman Effect**, demonstrated the inelastic scattering of photons by molecules, providing valuable insights into molecular structure and dynamics.



- The discovery of the Raman Effect earned **C.V. Raman the Nobel Prize in Physics in 1930, making him the first Indian to receive** this prestigious accolade.
- His pioneering research not only enhanced our **understanding of light-matter interactions** but also laid the foundation for various scientific and technological advancements in fields such as spectroscopy, materials science, and telecommunications.
- Among his other **notable contributions** is his work on the acoustics of musical instruments, where he investigated the physics behind the sounds produced by various instruments.




- Additionally, **Raman made significant contributions** to the field of crystal physics, elucidating the behaviour of light when passing through transparent materials such as crystals and gemstones.
- Beyond his scientific achievements, **C.V. Raman was a visionary leader** who played a pivotal role in shaping India's scientific landscape.



- He advocated for the **establishment of research institutions** and laboratories to foster scientific inquiry and innovation in the country.
- His efforts led to the founding of the Indian Academy of Sciences and the Raman Research Institute, institutions that continue to uphold his legacy by promoting excellence in scientific research and education.

Raman @ waves and sound

- He was fascinated by waves and sound, and seem to have carried in his mind the memory of reading **Helmholtz's** book in his school days.
- He was decisive to study musical instruments.
- Explained the working of **Ektara**



- Furthermore, **C.V. Raman was deeply committed** to science outreach and education, recognising the importance of nurturing young minds and fostering a scientific temperament among the masses.
- He believed in the **democratisation of knowledge** and strived to make science accessible to all sections of society, inspiring countless individuals to pursue careers in science and engineering.



THE RAMAN EFFECT

Indian physicist Chandrasekhara Venkata Raman was born on this day in 1888

Won the 1930 Nobel Prize for Physics; was the first Indian and non-white to receive any Nobel Prize in the sciences

His groundbreaking work led to his discovery of 'Raman scattering' and the 'Raman effect'

Discovered when light traverses a transparent material, some of the deflected light change wavelength and amplitude

Founded the Indian Journal of Physics and the Indian Academy of Sciences

THE RAMAN EFFECT

Chandrasekhara Venkata Raman, Indian physicist, was born today in 1888

Won the 1930 Nobel Prize for Physics, also awarded the Bharat Ratna

First Indian and Non-white to receive any Nobel Prize in the Sciences

His work on the scattering of light led to his discovery of "Raman Scattering" and the "Raman Effect"

He was so confident of winning that he booked his tickets to Sweden four months before the announcement

“ If the women of India take to science... they will achieve what even men have failed to do.”



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