

National Science Day

28TH FEB 2024

Theme: "Indigenous Technologies for Viksit Bharat"

Introduction

National Science Day is celebrated in India on February 28th each year to commemorate the discovery of the Raman Effect by Sir C.V. Raman. This significant event in the field of science took place on February 28, 1928.

The Raman Effect, a groundbreaking discovery in physics, earned Sir C.V. Raman the Nobel Prize in Physics in 1930. In honor of this achievement and to recognize the importance of scientific research and innovation, the Indian government designated February 28th as National Science Day in 1986.

The day is celebrated with various scientific activities, seminars, exhibitions, and competitions across the country. It aims to promote scientific thinking and highlight the contributions of scientists to society. Each year, National Science Day also carries a specific theme to focus on various aspects of science and technology.

Theme

The theme for National Science Day, "Indigenous Technologies for Viksit Bharat", this theme is to emphasize the relevance of indigenous innovations and showcases the work of Indian scientists. It also under-

scores the importance of homegrown solutions to address societal challenges and foster overall well-being. It reflects a strategic focus on promoting public appreciation for science, technology, and innovation highlighting the accomplishments of Indian Scientists.

Objectives of National Science Day

- 1. Celebrate Scientific Achievements:** The day commemorates notable scientific achievements, such as the discovery of the Raman Effect by Sir C.V. Raman. It serves as a platform to celebrate scientific milestones and contributions.
- 2. Promote Scientific Temper:** National Science Day encourages the development of a scientific attitude and temperament among people. It aims to foster an appreciation for the importance of science in everyday life.
- 3. Showcase Scientific Research:** The day provides a platform to showcase ongoing scientific research, innovations, and advancements. It helps in creating awareness about the latest developments in various scientific fields.
- 4. Encourage Scientific Education:** National Science Day promotes the importance of science education and encourages students to take an interest in scientific studies. It aims to inspire the younger generation to pursue careers in science.

5. Highlight Science and Technology Policies: The day is an opportunity to highlight government policies and initiatives related to science and technology. It emphasizes the role of science in national development.

6. Organize Scientific Activities: National Science Day involves organizing various scientific activities, such as seminars, workshops, exhibitions, and science fairs. These activities aim to engage the public and provide a platform for scientific discussions.

7. Raise Public Awareness: It plays a crucial role in raising public awareness about the significance of science in solving societal problems, improving living standards, and contributing to economic growth.

What is the Raman Effect?

The Raman Effect is an inelastic scattering of light by matter, meaning there is an exchange of energy and a change in the light's direction. This phenomenon occurs when a photon (particle of light) interacts with a molecule and excites to a higher vibrational or rotational energy state.

How it works

- ◆ **Incident light:** A beam of light, typically from a laser, shines on a sample.
- ◆ **Interaction with molecules:** Photons in the beam interact with the electrons in the molecule.
- ◆ **Energy transfer:** Some of the photons lose energy to the molecule, causing it to vibrate or rotate at a higher-level energy.
- ◆ **Scattered light:** The excited molecule then releases the energy as a photon with a different frequency (color) than the incident light. This scattered light is called the Raman scattered light.

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