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Dr. Ramjay Pal: From Kharagpur College to National Defence – A Journey of Scientific Excellence

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Born on **January 4, 1959**, in West Bengal, **Dr. Ramjay Pal** embodies the spirit of dedication, perseverance, and scientific innovation. A proud alumnus of **Kharagpur College**, where he completed his **B.Sc. (Hons.) in Physics in 1979** under the University of Calcutta, Dr. Pal's academic journey is a shining example for aspiring students who dream of turning curiosity into national contribution.

Fuelled by a deep passion for physics, he went on to pursue his **M.Sc. in Solid State Physics** from the prestigious **Indian Institute of Technology, Kharagpur** in 1982, followed by an **M.Tech in Semiconductor Materials** in 1984. His unrelenting pursuit of knowledge led him to complete his **Ph.D. in 1997** at the same institute, focusing on the **growth and characterization of III-V compounds and alloys**—a subject at the heart of modern electronics and optoelectronics.

In 2002, he expanded his research horizons globally by undertaking **post-doctoral research** at **Trento University, IRST, Italy**, where he worked on the **fabrication of RF MEMS switches**, a cutting-edge area in micro-electro-mechanical systems.

Dr. Pal dedicated over **three decades of his life (1984–2019)** in service to the nation as a **Scientist in the Defence Research and Development Organization (DRDO)**. His work played a pivotal role in strengthening India's technological base, particularly in advanced material science and semiconductor device research.

His field of expertise includes:

- **Growth and characterization of GaAs and InGaAs by Vapour phase epitaxy (VPE) on GaAs and InP substrates**

- **Characterization of epi-layers using structural, compositional, electrical and optical techniques**
- **Growth and characterization of GaAs and InGaAs (lattice matched and lattice mismatched layers by Metal Organic chemical vapour deposition (MOCVD) technique On GaAs and InP substrates**
- **GaAs/Ge layer grown for solar cell application.**
- **Fabrication of Silicon based switches.**
- **MEMS(Micro-electro-mechanical system) Device fabrication**

Dr. Ramjay Pal's life stands as a beacon for students from humble beginnings, especially those walking through the corridors of Kharagpur College today. His journey from a small-town college to some of the world's finest research laboratories shows that with commitment, vision, and hard work, boundaries can be broken, and new frontiers can be reached.

Today, Dr. Pal remains a symbol of how education, when paired with determination, can empower individuals to serve science and the nation with distinction.