



हरकोर्ट बटलर प्राविधिक विश्वविद्यालय

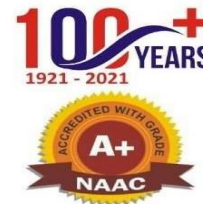
नवाबगंज, कानपुर – 208002, उ.प्र., भारत

HARCOURT BUTLER TECHNICAL UNIVERSITY

NAWABGANJ, KANPUR - 208002, U.P., INDIA

(Formerly Harcourt Butler Technological Institute, Kanpur)

Phone : +91-0512-2534001-5, 2533812, website : <http://www.hbtu.ac.in>, Email : vc@hbtu.ac.in



Report on Expert Talk by Dr. Jyoti Srivastava Date: 26/11/2025

The Department of Oil Technology, Harcourt Butler Technical University (HBTU), Kanpur, organized an expert lecture titled "**Role of Lubricants in National Defense Mechanism**" on **26 November 2025** for B.Tech. students, faculty members, and research scholars. The expert talk was delivered by **Dr. Jyoti Srivastava, Scientist 'G', Head – Fuel and Lubricants Division, Defence Materials and Stores Research & Development Establishment (DMSRDE), Kanpur**. The objective of the lecture was to provide students with insights into the critical role of lubricants and lubrication technologies in defense applications. Dr. Srivastava highlighted the importance of advanced lubricants in ensuring the reliable operation, efficiency, and extended service life of sophisticated defense systems, including military vehicles, aircraft, naval systems, and specialized equipment operating under extreme environmental conditions. During the session, Dr. Srivastava explained the fundamental principles of lubrication, lubricant formulation, and performance evaluation. She discussed various types of lubricants, including mineral oils, synthetic lubricants, greases, and specialty lubricants developed for high-performance applications. Special emphasis was given to the requirements of defense lubricants, such as high thermal stability, oxidation resistance, corrosion protection, wear reduction, low-temperature performance, and compatibility with advanced machinery. The lecture was highly relevant for B.Tech. Oil Technology students as it connected their academic knowledge of oils, fats, lubricants, additives, tribology, and lubricant formulation with real-world defense applications. Dr. Srivastava explained the challenges associated with developing lubricants capable of functioning under extreme operating conditions, including high temperature, pressure, varying climatic conditions, and prolonged operational requirements. The speaker also discussed the research and development activities carried out in the field of fuels and lubricants for defense applications. She highlighted the importance of advanced testing techniques, quality standards, indigenous development of specialty lubricants, and continuous innovation to support national defense capabilities. The session provided students with an understanding of the role of scientific research in developing self-reliant technologies for strategic sectors.



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Dr. Srivastava encouraged students to enhance their technical knowledge, analytical skills, and research capabilities to contribute to emerging areas of lubricant technology, tribology, and advanced materials. She also shared valuable insights regarding career opportunities in research organizations, defense laboratories, and industrial sectors related to oils, lubricants, and energy technologies. An interactive question-and-answer session was conducted after the lecture, where students actively participated and discussed topics related to lubricant selection, additive technology, testing methods, biodegradable lubricants, and future developments in defense lubrication systems. The interaction helped students understand the practical challenges and opportunities associated with advanced lubricant development. The expert talk was highly informative and inspiring for all participants. It provided valuable exposure to the application of oil technology in strategic sectors and strengthened the connection between academic learning and national industrial requirements. The Department of Oil Technology sincerely expresses its gratitude to **Dr. Jyoti Srivastava** for delivering an insightful lecture and sharing her expertise with B.Tech. students, thereby contributing significantly to their academic and professional development.