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## DRDO HANDS OVER COMPUTERISED PSYCHOLOGICAL SCREENING SYSTEM TO CRPF





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## DRDO HANDS OVER COMPUTERISED PSYCHOLOGICAL SCREENING SYSTEM (COPSYSS) TO CRPF

The Computerised Psychological Screening System (COPSYSS) was handed over by Dr UK Singh, Distinguished Scientist & Director General (Life Sciences) to Dr Sujoy Lal Thaoson, Director General, Central Reserve Police Force (CRPF) in the gracious presence of Dr Samir V Kamat, Secretary, DDR&D and Chairman, DRDO on 08 August 2023.

Speaking on the occasion, Dr Arunima Gupta, Director, Defence Institute of Psychological Research (DIPR), Delhi highlighted that the user friendly COPSYSS was conceptualised, specific modalities of test administration was evolved and standardised after a series of interactions, field trials, on-site evaluations

by DIPR in synergy with team CRPF. During the occasion, Shri Sangita Rao Achary Addanki, Director, Directorate of Low Intensity Conflict (DLIC), DRDO HQrs and team presented overview on the various technologies and systems being developed by DRDO for the CRPF.

Dr Chandrika Kaushik, Director General, Production Coordination & Services Interaction (PC&SI), DRDO HQrs briefed DG, CRPF on R&D efforts of DRDO in development of numerous products for Low Intensity Conflicts (LIC) and emphasised that many indigenously developed defence products have been produced in numbers by Indian industry and are available for use

by Central Armed Police Forces (CAPF). Dr Singh congratulated the team and enumerated the contributions of Life Sciences cluster laboratories in supporting the CAPFs. He stressed that multiple innovative products have already been handed over to CRPF & few of the identified products are in the advanced stages of development.

Chairman, DRDO complimented the team members from DIPR and CRPF for their synergistic efforts in development of the COPSYSS.

The event coordinated by DLIC, DRDO HQrs was graced by senior scientists from DRDO, Inspectors General and senior officials from CRPF.



## SIGNING OF TRIPARTITE MOU FOR PRODUCTION OF AESAR (UTTAM)

Tripartite MoU was signed for the production of Active Electronically Scanned Array Radar (AESAR) UTTAM for LCA Mk-1A between Electronics & Radar Development Establishment (LRDE), Hindustan Aeronautics Limited (HAL), and Industry Partners on 07 July 2023 at LRDE, Bengaluru. The meeting was chaired by Dr BK Das, DS & DG (ECS). Shri Gampala Viswam, DS & Director, LRDE, Dr DK Sunil, Director, Engg (R&D), Shri Duvvuri Seshagiri, OS, and senior officers from LRDE and Representatives from HAL and various Industry Partners were also present during the occasion.



### EVENTS

## LCA TEJAS SUCCESSFULLY TEST-FIRES INDIGENOUS ASTRA BVR AIR-TO-AIR MISSILE

Light Combat Aircraft (LCA) Tejas, LSP-7 successfully fired the ASTRA indigenous Beyond Visual Range (BVR) Air-to-Air missile off the coast of Goa on 23 August 2023. The missile release was successfully carried out from the aircraft at an altitude of about 20,000 ft. All the objectives of the test were met and it was a perfect text book launch. The test launch was monitored by the Test Director and scientists of Aeronautical Development Agency (ADA), Hindustan Aeronautics Limited (HAL) along with officials from

Centre for Military Airworthiness and Certification (CEMILAC) and Directorate General of Aeronautical Quality Assurance (DG-AQA). The aircraft was also monitored by a Chase Tejas twin seater aircraft.

ASTRA, a state-of-the-art BVR Air-to-Air missile to engage and destroy highly maneuvering supersonic aerial targets, is designed and developed by Defence Research and Development Laboratory (DRDL), Research Centre Imarat (RCI) and other laboratories of DRDO.

The indigenous Astra BVR firing from home grown Tejas fighter is a major step towards 'Aatmanirbhar Bharat'.

Raksha Mantri Shri Rajnath Singh complimented ADA, DRDO, CEMILAC, DG-AQA and the industry for the successful firing of the missile from Tejas-LCA. He said the launch would significantly enhance the combat prowess of Tejas and reduce the dependency on imported weapons. Secretary, DD R&D and Chairman DRDO also congratulated the teams involved in the launch.



# DRDO DIRECTORS' CONCLAVE-2023

**National security strategy must evolve in line with changes in geo-political order: Chief of Defence Staff General Anil Chauhan at DRDO Directors' Conclave**

DRDO Directors' Conclave, an annual event of DRDO was celebrated on 14 July 2023 at DRDO HQrs, New Delhi. The two-day conclave was organised as a follow-up to the various Chintan Shivir meetings and a review of their outcome by the Hon'ble Raksha Mantri Shri Rajnath Singh. The conclave was attended by top officials of DRDO including DGs of various technology as well as corporate clusters, Directors of various DRDO laboratories, Directors of DRDO HQrs, and Integrated Financial Advisors (IFAs). The event included deliberations on various issues in line with the theme 'Redefining Role of DRDO in the Wake of New Government Policies and Emerging Scenarios' through six technical sessions each followed by a panel discussion.

Chief of Defence Staff (CDS) General Anil Chauhan said that international geopolitics is in flux and the national strategy should aim to absorb the changes in such a way that it meets the challenges and exploits the opportunities. General Chauhan stressed the need to perform, reform, transform, inform, and conform to meet emerging challenges.

Referring to the 'Technology Requirements Emerging from Theaterisation', he said superiority in technology and tactics is the need of the hour and Indian Armed Forces are investing in new technologies to win engagements. Highlighting the principles of jointness, integration, and



theaterisation, General Anil Chauhan said in the national security realm, the concept of theaterisation is a fundamental change that is on the anvil.

"It is one of the most ambitious changes with far-reaching implications attempted post-independence. The start of this journey depends on the right steps being taken first towards jointness and integration. Theaterisation involves the creation of tri-service theatre-specific structures for effective response along the entire spectrum of conflict," said General Anil Chauhan.

Dr Samir V Kamat, Secretary, DD R&D & Chairman DRDO, during his inaugural address, highlighted the changes occurring as warfare and criticality involved in them. He stressed the need to reform and transforms the perspectives in tandem with Hon'ble Prime Minister Shri Narendra Modi's goal of Make in

India. General Chauhan released the DRDO's second list of systems and subsystems for the industry to design, develop, and manufacture, in line with the Aatmanirbhar Bharat. This second list is in continuation of the list of 108 items released earlier. He also released the 'DRDO Guidelines for Production Coordination', which outlines the mechanism for production coordination and resolution of issues associated with the production of DRDO-developed military equipment/platforms/systems. The guidelines brought out a two-tier mechanism to resolve issues related to the production of these systems by involving designers, users, production agencies, quality agencies, and other stakeholders. The initiative will further pave the way for the Indian defence industry to develop defence technologies/systems towards Aatmanirbhar Bharat.



## AZADI KA AMRIT MAHOTSAV

Azadi Ka Amrit Mahotsav (AKAM) is an initiative of the Government of India to celebrate and commemorate 75 years of independence and the glorious history of its people, culture, and achievements. The Mahotsav is dedicated to the people of India, who have not only been instrumental in bringing India thus far in its evolutionary journey but also hold within them the power and potential to enable Hon'ble Prime Minister Narendra Modi's vision of activating India 2.0, fuelled by the spirit of Aatmanirbhar Bharat.

The following laboratories of DRDO celebrated AKAM by conducting several events and science exhibitions to showcase their products, technologies, and achievements. The science exhibition was in line with the theme of the AKAM: Growth of the Defence R&D Ecosystem—Way to Atmanirbharta'.

### ACEM, Nasik

The Advanced Centre for Energetic Materials (ACEM), Nasik organised a four-day science exhibition during 26-28

July 2023 at Ozar, Nasik, and on 29 July 2023 in the DRDO Residential Colony, CIDCO. The exhibition was inaugurated by Shri TV Jagadeeswar Rao, GM, ACEM, on 26 July 2023. More than 700 undergraduate students from various science and engineering colleges/institutes, and schools across Nasik city visited the exhibition. The exhibition was set up in three parts, consisting of video tutorials, a poster gallery, and an interactive discussion of various aspects of work carried out by DRDO and ACEM.

Different divisions of the laboratory displayed their functions in the processing of solid propellant in the form of models, charts, prototypes, and posters. These helped students to understand the nuances of rocket motors and solid propellants in general. Students and teachers appreciated the efforts taken by the ACEM for conducting the exhibition displaying the unique products of DRDO. The programme was a grand success and ACEM will come up with many more research products in the years to come.

### CVRDE, Chennai

Combat Vehicles Research & Development Establishment (CVRDE), Chennai organised a science exhibition during 21-23 July 2023. To create awareness among the student fraternity, a dedicated session was arranged to explain various opportunities available in the field of S&T, particularly in DRDO. Lectures by senior scientists, a video show about the CVRDE-developed products, scale-down models at indoor premises, and a display of original equipment in an outdoor area were arranged during the exhibition. More than 3500 participants witnessed the exhibition and took a keen interest in the showcased products and technologies.

The exhibition was coordinated by Shri J Rajesh Kumar, Sc 'H' & Addl. Director (MBT), Chairman; Shri T Panneerselvam, Sc 'G' & Addl Director (ToT), with overall coordination by Shri K Anbazhagan, Sc 'F' & Head (Exhibition & Media Interaction Services); and laboratory PRO Shri RP Chandrasekar, Sc 'D'.



General Manager, ACEM interacting with Students



AKAM Celebrations at CVRDE, Chennai



## DESIDOC, Delhi

Fifty-five students along with three professors from Department of Library & Information Science (LIS), Delhi University, Delhi visited Defence Scientific Information & Documentation Centre (DESIDOC), Delhi on 02 August 2023. The students visited the Defence Science Library of DESIDOC, Publications Division, Multimedia Division, Data Centre, and Polygraphy Division. A film highlighting DESIDOC activities as well as a film on DRDO achievements during last 9 years was showcased on the occasion. Dr K Nageswara, Director, DESIDOC also addressed the students. The visit was coordinated by Shri Tapesh Sinha, Sc 'E'.



MREs, mark-II self-heating system, sea-dye marker, combo meals, energy-dense food bars, jiffy food products, functional drinks & beverages, PARAKH mobile containment laboratory, etc. to meet the requirement of Armed Forces deployed in inhospitable terrains and various weapon platforms and for critical missions were displayed during the exhibition. Millet technologies and products developed by DFRL and an automatic millet roti-making machine were also displayed in the exhibition on the occasion of the celebration of the International Year of Millet (IYoM)-2023.



(Raksha Anusandhan evamVikas) Paaritantra-2023' on 29 July 2023. Ms Sonal V Misra, IG (Provisioning), CRPF was the Chief Guest for the occasion.

Dr Rajeev Varshney, Director, DIPAS apprised everyone regarding the ongoing initiatives at DIPAS for the development of defence R&D ecosystem and he explained how CAPFs and young budding scientists can play a pivotal role in taking this initiative forward. Around 150 students (Classes X-XII) from different Delhi-based schools were also invited for the workshop. The students got the opportunity to visit various laboratories of the institute, inspiring them to explore the world of scientific research for making India self-reliant in the niche area of critical defence technologies. The workshop was also attended by representatives from DRDO Corporate HQrs, O/o DG (LS), Heads and teachers of schools, scientists, and technical staff from DIPAS. A quiz competition based on science, DRDO, Azadi, and current affairs was also organised for the students, for which a certificate of participation was also presented to them.

## DFRL, Mysuru

A one-day exhibition depicting the R&D achievements of the Defence Food Research Laboratory (DFRL), Mysuru, during the last 9 years, was organised at the DFRL on 08 July 2023. Shri Vipin Kumar Kaushik, Director, Directorate of Public Interface, DRDO HQrs inaugurated the exhibition in the presence of Dr Anil Dutt Semwal, Director, DFRL, Mr Vipul Gupta, Director (Admin) O/o DGLS, New Delhi, and Dr R Kumar, Associate Director, DFRL.

Technologies and products developed by DFRL between 2014-2023 such as terrain, weapon, platform, and theatre-specific

## DIPAS, Delhi

Under the aegis of the AKAM campaign, the Defence Institute of Physiology & Allied Sciences (DIPAS), Delhi organised a workshop entitled 'DIPAS RAVI





## DIPR, Delhi

Under the AKAM campaign, a special event and a science exhibition was organised by Defence Institute of Psychological Research (DIPR), Delhi on 22 July 2023. Large number of young children aged 14 to 18 years enthusiastically participated in a range of creative activities and were enthralled to visit various specialised centres in the laboratory. While addressing the students and faculty members, Dr Arunima Gupta, Director, DIPR gave an overview of the R&D activities spearheaded by the laboratory and emphasised that Indian soldiers are trained to discharge their duties effectively in extreme climatic conditions ranging from desert to high altitude areas, unconducive geographical terrain and hostile environment.

Through audio-visual media, info-graphics and interactive presentations, students witnessed the broad contours of responsibilities of Armed Forces and an enlarging spectrum of unique challenges in guarding the nation's vital interests and security. Senior scientists and officers from the Armed Forces deliberated with students on various career



School Students & Teachers along with Director, DMRL & Team from DMRL celebrating Azadi Ka Amrit Mahotsav at DMRL, Hyderabad

opportunities available to them for joining Armed Forces and DRDO.

Thereafter, a visit to Experimental Lab for truncated/customised demo of Computerised Pilot Selection System (CPSS) was organised which was one of the key highlights of the science exhibition. They were explained in brief about the process of selection of potential candidates as military pilots in the Armed Forces.

## DMRL, Hyderabad

Defence Metallurgical Research Laboratory (DMRL), Hyderabad organised an exhibition under AKAM showcasing products and technologies developed by the DMRL. The one-day exhibition was organised on 22 July 2023 for school/college students

from Kendriya Vidyalaya, Kanchanbagh, Defence Labs School, Kanchanbagh, and Defence Labs School, RCI, VignyanKancha. About 200 students and a few family members visited the exhibition.

The exhibition was inaugurated by Dr G Appa Rao, OS & Associate Director, DMRL. Upon arrival, Dr R Sharat Chandra, Sc 'E' welcomed all the visitors. Dr Appa Rao addressed the students with a very motivating and inspiring speech. The school students with their young and curious minds interacted with senior scientists of DMRL. They took keen interest in DMRL products and technologies and praised the work done by DMRL fraternity.

The event provided an ideal platform for the students and public to learn and get acquainted with the latest developments in the field of materials for defence and aerospace applications.

## TBRL, Chandigarh

Terminal Ballistics Research Laboratory (TBRL), Chandigarh organised a one-day exhibition for students and faculty on 22 July 2023 at TBRL Ranges,



School Students & Teachers along with Director, DIPR & Team from DIPR during the students' visit at DIPR, Delhi



AKAM Celebrations at TBRL, Chandigarh

Ramgarh, District Panchkula. The teams of officers, and staff of TBRL presented more than 50 technologies, products, and processes developed in the recent past to demonstrate the growth and initiation of indigenous capabilities. The exhibition was arranged in two phases, for the students of schools and engineering colleges and for higher education studies separately. The event was attended by more than 30 teachers and 500 students of various schools from Panchkula, Chandigarh, and Barwala.

Apart from school students, more than 30 faculty and 400 engineering and higher education students from IIT Roorkee; IIT Ropar; PEC Chandigarh; Thapar University Patiala; Panjab University, Chandigarh; UIET, Chandigarh; Plaksha University, Mohali; Amity University, Mohali and also from PGGC Co-ed Sector 11, PGGC Girls Sector 11, PGGC Sector 42 & Sector 46, Chandigarh participated. On the occasion, Prof. Prateek Kishore, Director, TBRL, addressed the students and faculty. He informed the participants about various schemes launched by DRDO for collaborative research with academic institutes. He appealed to

the students and faculty members to work in partnership with DRDO to undertake challenging problems in defence research and contribute to the noble cause of nation-building.

Dr Prince Sharma gave an overview of ballistics to students. He also presented various research activities being undertaken at TBRL. Shri Subhash Chander gave a detailed presentation about the Rail Track Rocket Sled (RTRS) facility and its applications to various programmes of national importance.

Shri AC Sharma, Associate Director, TBRL was the Chairman of the Organising Committee.

## VRDE, Ahmednagar

Vehicles Research & Development Establishment (VRDE), Ahmednagar conducted an 'Open House Exhibition' at National Centre for Automotive Testing on 15 July 2023 for school/college students as well as for the general public. The visitors were taken around the test track facilities of NCAT. A demonstration was arranged on the ABS test track to educate the people about the usefulness of the Anti-Lock Braking System. The display of project vehicles developed by VRDE was also arranged during the visit. The products like CBRN Mini UGV, Rustom-II UAV Engine, BMP-based Light Tank, Armoured Amphibious Dozer, 70 t Tank Transporter, Wheeled CBRN, Wheeled Armoured Platform (WhAP), Autonomous Unmanned Ground Vehicle and Robotic Kit of Automated Driving were demonstrated. A live demo of WhAP and Autonomous UGV (AUGV) was also given. A movie showcasing the products and testing facilities of VRDE was also screened during the event.



# INDEPENDENCE DAY CELEBRATIONS

## DESIDOC, Delhi

The Defence Scientific Information & Documentation Centre (DESIDOC), Delhi celebrated 77th Independence Day on 14 August 2023. Dr Mohd Yousuf Ansari, Sc 'F' & Associate Director along with Havaldar SK Pattnayak, 1121 DSC Platoon hoisted the national flag on the roof of the DESIDOC building.

All the officers and staff of DESIDOC were also present on the occasion.

## DIPR, Delhi

Defence Institute of Psychological Research (DIPR), Delhi celebrated 77th Independence Day with great zeal and patriotic fervour on 15 August 2023.

Reminiscing the great sacrifices of our freedom fighters, Dr Arunima Gupta, Director, DIPR hoisted the national flag followed by the rendition of national anthem in the presence of senior scientists and officers from the Armed Forces. Marking the significant occasion, to invoke sense of patriotism among the citizens, celebrate achievements of the nation and honour brave hearts who protect our country, the 'Har Ghar Tiranga' and 'Meri Maati Mera Desh' campaigns under the aegis of AKAM was wholeheartedly celebrated by the enthusiastic members of the DIPR family.

Director, DIPR greeted everyone, thanked them for their immense contributions and urged upon all the officers and staff



to rededicate themselves to the service of the country.

## DMSRDE, Kanpur

Defence Materials and Stores Research & Development Establishment (DMSRDE), Kanpur, celebrated 77th

Independence Day amidst great enthusiasm on 15 August 2023. The event commenced with hoisting of the National Flag by Dr Mayank Dwivedi, OS & Director, DMSRDE followed by National Anthem.

To mark the celebration of

AKAM and 'Har Ghar Tiranga' campaign, DMSRDE employees including DSC personnel carried out a Tiranga Cycle rally on the occasion.

The rally was organised from DMSRDE Main Gate to Sati Chaura Monuments and back. The rally was inaugurated by Director, DMSRDE who himself led the rally from the front.

The 50 bicycle riders participated in the event and reached out to local populace enroute and apprised them about the importance of National Flag and to hoist the flag at each and every household as part of 'Har Ghar Tiranga' campaign.

The rally was organised with a focus on the youth of the country to get them connected with the brave stories of our freedom fighters and with the sacrifices made by unsung heroes of India's freedom movement. The event was coordinated by Shri Amit Saraiya, Sc 'F'.



### NSTL, Visakhapatnam

The 77th Independence Day was celebrated at Naval Science & Technological Laboratory (NSTL), Visakhapatnam, in a colourful manner. In his inspiring speech, Dr Abraham Varughese, OS & Director, NSTL appealed to put maximum efforts for safeguard the nation with the inspiration of

sacrifices by the freedom fighters. He said NSTL is moving towards achieving self-reliance with the development of state-of-the-art underwater weapons. Officers, members of the Works Committee, NSTL Civil Employees Union, and staff of NSTL participated in the event.



## DRDO PARTICIPATION AT UJJAWAL RAJASTHAN

The Defence Research & Development Organisation (DRDO) participated in three-day mega exhibition 'Ujjawal Rajasthan-2023' at Udaipur, Rajasthan, during 27-29 July 2023. The theme of the mega exhibition was 'Achieving Goals, Reaching New Heights'. The exhibition was conceptualised to help government's endeavours to establish an industry-friendly environment in the state by playing the role of facilitator for holistic industrial development. Various laboratories of DRDO, viz. Institute of Nuclear Medicine & Allied Sciences (INMAS), Defence Institute of Physiology & Allied Sciences (DIPAS), Solid State Physics Laboratory (SSPL), Defence Laboratory



Jodhpur (DLJ), and Centre for Fire, Explosive and Environment Safety (CFEES) participated in the exhibition and showcased their products, and technologies.

Defence Scientific Information & Documentation Centre (DESIDOC) also participated in the exhibition and was the nodal laboratory for the event.

## RAISING DAY CELEBRATIONS AT DMSRDE

The Defence Materials and Stores Research & Development Establishment (DMSRDE), Kanpur, celebrated its 47th Raising Day on 29 July 2023. The event was graced by Dr Y Sreenivas Rao, DS & DG (NS&M), as the Chief Guest and Shri GV Rao, Former Director CPDC, Advanced Systems Laboratory (ASL), Hyderabad as the Guest of Honour. The event started with the planting of trees by the Chief Guest, Guest of Honour, and the Invited Guests. Dr Mayank Dwivedi, OS & Director, DMSRDE in his address highlighted various achievements; milestones achieved, and progress of several ongoing project activities.

Chief Guest Dr Rao in his address, appreciated the work



carried out at DMSRDE. He also emphasized the Govt. of India initiative Amrutkal-2047 and to work in conjunction with academia through DIA-CoE to develop niche technologies. Inauguration

of the 25th Edition of DMSRDE Grah Patrika 'Navchintan' and distribution of Sports Awards by the Chief Guest and Guest of Honour. Shri Amit Saraiya, Sc 'F' proposed the vote of thanks.

## TRIBUTE TO DR APJ ABDUL KALAM–VIGNANA BHOOMI

In the commemoration of Former President of India and Missile Man Dr APJ Abdul Kalam's 8th death anniversary on 27 July 2023, Estate Management Unit (R&D), Hyderabad paid tribute to the stalwart in the RCI Residential Area. The event was held in the lawns of the Transit Facilities where Dr Kalam stayed for a long time. In Dr Kalam's honour, the place was named as 'Vignana Bhoomi'. Shri U Raja Babu, DG (MSS), Shri Anindya Biswas, Director, RCI, Shri GDG Prasad Raju, CCE (R&D) Estates (South), Dr Shaikh Ghous Mohiddin, Addl CCE & Estate Manager along with their teams were also present during the occasion.

During his address, Shri Raja Babu appealed all employees to walk in Dr Kalam's footsteps and move forward with his inspiration. Mr Biswas wished every employee to work with commitment to uphold ethical values. In his address, Dr Mohiddin informed that Dr Kalam is an example of modest living, hardworking, and committed towards the nation.



EMU, Hyderabad also inaugurated a nursery on the same day. The Nursery is termed as 'Aatma Nirbhar Nursery' which is inspired by the Hon'ble Prime Minister Shri Narendra Modi's Atmanirbhar Bharat Abhiyan slogan. The nursery is completely self-sustaining and designed with in-house expertise. Micro greens, vegetables, fruits and medicinal plants, cultivation of mushrooms, production of vermicompost, preparation of de-composer solution, maintenance of check

dams, etc. are part of this nursery. Shri Raja Babu appreciated that this nursery will certainly bring new excitement to the employees and residents of RCI Township. Sri Prasad Raju wished that EMU (R&D), Hyderabad should take the lead in conducting such programmes in large number in the near future. In his address, Dr Mohiddin informed that the inauguration of nursery was done within a short span of time and this nursery will be self-sufficient in its functioning.

## HOMAGE TO DR APJ ABDUL KALAM

Naval Physical & Oceano-graphic Laboratory (NPOL), Kochi observed the 8th Death Anniversary of Dr APJ Abdul Kalam on 27 July 2023. The statue of Dr APJ Abdul Kalam at the NPOL façade was garlanded. Dr Ajith Kumar K, OS & Director, NPOL offered a floral tribute. This was followed by floral tributes from senior officers and staff of NPOL.



## NPOL WINS SWACHHATA PAKHWADA-2022 AWARD

Naval Physical and Oceanographic Laboratory (NPOL), Kochi won 2nd position among DRDO laboratories in the Swachhata Pakhwada event envisioned by the Hon'ble Prime Minister for doing Swachhata 'Everyone's Business'. DRDO organised the campaign from 1-15 December 2022. Dr K Ajith Kumar, Sc 'G' & Director, NPOL, received Shield Trophy from the Department of Drinking Water & Sanitation (DDWS), Ministry of Jal Shakti from Dr Samir V Kamat, Secretary DD R&D & Chairman DRDO at an event held at New Delhi on 14 July 2023.

As the Nodal officer of the 'Swachhata Pakhwada-2022' campaign at NPOL, Smt Letha MM, Sc 'F', coordinated diverse activities such as taking of Swachhata Pledge, Cleanliness Drive, reviewing & weeding out old records, disposal of waste from the

campus, planting trees, conducting various competitions, and creating awareness among all stakeholders during the two weeks long event. Scientists from NPOL delivered an awareness presentation with topics related to cleanliness in daily life for students of Bhavans Varuna Vidyalaya, which 200 students attended. A Swachhata

awareness rally from the NPOL main gate to NGO Quarters circles with the participation of around 150 employees of NPOL.

NPOL was conferred with this prestigious award by a committee constituted under the chairmanship of the DG (HR) after reviewing the activities of all laboratories of DRDO.



## HARELA CELEBRATIONS AT DEAL

The start of the monsoon season is celebrated as Harela in the state of Uttarakhand with great fervor and enthusiasm. It signifies the beginning of the sowing cycle for farmers. As it is associated with greenery, massive plantation drive is carried out across the state. On 17 July 2023, Shri LC Mangal, Director, Defence Electronics Applications Laboratory (DEAL), Dehradun led the plantation campaign by planting saplings around DEAL Wellness Centre along with senior scientists and work committee members.

Shri Mangal stressed the



importance of traditional celebrations and their significance

towards our co-existence with the eco-system.

## ARDE CELEBRATES LIBRARY WEEK

The Information Centre for Armament Technology (ICAT), library of ARDE, Pune celebrated Library Week from 7-11 August 2023. Shri A Raju, OS & Director, ARDE inaugurated the event on 8 August 2023. During the inauguration day, Book Exhibition and Open Book Quiz were opened for ARDE employees. Nearly 5000 books were on display during the exhibition. Special guest lecturers were organized as a part of the closing ceremony on 11 August 2023. Prof. (Dr) Rajendra Kumbhar from Savitribai Phule University Pune gave a talk on Reading Habit and Shri Sudhanshu Bhushan, Sc 'F', DESIDOC, Delhi gave a talk on scholarly communications. Shri Ramesh Kumar, OS & Associate



Director and Dr BB Padhy, Sc 'G' graced the occasion. Shri AK

Pandey thanked all the users for making the event a grand success.

## NATIONAL LEVEL MILLET RECIPE CONTEST

Defence Food Research Laboratory (DFRL), Mysuru organized the National level Millet Recipe Contest on the occasion of celebration of International Year of Millets 2023 during May-July 2023. The theme for the competition was traditional millet recipes with modern blend using major millets such as Pearl millet, Finger millet and Sorghum. Categories of Products include bakery items, snacks (savory items, bars), beverages, ready to-cook, convenience mixes.

A total of 152 registrations were received and 69 recipes were submitted by the participants from 15 states of the India. Based on the scrutiny 5 teams were selected for the contest and 3 teams played the final round on 17 July 2023. Dr

Anil Dutt Semwal, Director, DFRL inaugurated the contest in the presence of Dr R Kumar, Associate Director and Dr DD Wadikar.

The award ceremony was organized on 18 July 2023. Ms Paridnya Mokal, DY Patil University, Mumbai, Maharashtra

won the First prize, Mr MS Adarsh Iyengar and Mr Sumantha H, Tumkur University, Tumkur, Karnataka got the Second Prize and Ms Komal Dhanke, Ms Jahnavi Kailaje and Mr Ujjwal Saini, ICT, Jalna, Maharashtra were awarded with the Consolation Prize.







## LADAKHI KISAN JAWAN VIGYAN MELA-2023

Defence Institute of High Altitude Research (DIHAR), Leh, organised the 30th Ladakhi Kisan Jawan Vigyan Mela during 19-20 August 2023 with objectives of disseminating technical know-how related to latest agro-animal technologies developed by DIHAR among the local farmers and troops deployed in Ladakh sector.

The Mela was inaugurated by Brig. (Dr) BD Mishra, Hon'ble Lt Governor of Ladakh in benign presence of Dr Samir V Kamat, Secretary, DD R&D & Chairman DRDO, Maj. Gen SS Bakshi, SM, GOC, Leh Sub-Area, Dr Pawan Kotwal, Advisor to Hon'ble LG, First Lady Mrs Neelam Mishra, Mrs Samir Kamat, and Dr OP Chaurasia, Director DIHAR.



Representatives from LAHDC, Army and district officers, local farmers and students attended the event in large numbers. Brig. (Dr) Mishra lauded endeavors of DIHAR made over the years since 1960s and appreciated the scientists in supporting local

farmers to cultivate quality organic fresh foods which is supplied to troops deployed in the harshest environmental conditions. During the Mela, various competitions were also organised among local farmers, entrepreneurs, and Army units.

## ANNUAL TRI-SERVICES MEET AT DIPR

Defence Institute of Psychological Research (DIPR), Delhi organised Annual Tri-Services meet on 17 August 2023. The meeting was chaired by Dr UK Singh, DS & DG (LS) and attended by Brig Kaushik Mukherjee, SM, DDG, Rtg A, Cmde Amit Shrivastava, Cmde MPR, DIG S Raja Nagendran, Indian Coast Guard, Gp Capt RR Tamhane, DPO-3, senior officials from Armed Forces, scientists and service officers from DIPR.

The officials reviewed various aspects concerning the existing officer selection system, deliberated on the actions initiated and progress made with respect to the previous consultations & discussed new requirements. Dr Arunima Gupta, Director, DIPR

emphasised that the synergistic efforts between Services HQrs as policy makers, implementer of policies and DIPR as the designer, developer & maintaining effectiveness of the officer selection system, reflects the collective commitment of our organisations.

DIPR team provided an overview on the activities being progressed at the lab for strengthening the Selection System and highlighted that pilot study is being carried out to explore the feasibility of infusing emerging technologies in selection assessment techniques.





## COURSE ON SCHOLARLY WRITING

The Defence Scientific Information & Documentation Centre (DESIDOC), Delhi organised a Continuing Education Programme (CEP) on 'Scholarly/Scientific Writing and Publishing' during 19-21 July 2023. The objective of the course was to bring awareness among the DRDO fraternity about the importance of research writing and the ways and means to achieve it. The course was attended by 20 participants from various DRDO laboratories/establishments.

The major topics covered were scholarly communication, publishing metrics, utilisation of the DRDO e-journal consortium, an overview of DRDO publications, plagiarism detection, and prevention, writing high-quality manuscripts, referencing tools,



etc. Dr Mohd Yousuf Ansari, Sc 'F' inaugurated the course and shared his personal experience in scientific communication. Mrs Alka Bansal, Sc 'F' & Course Director emphasised writing high-quality papers. Shri Yogesh Modi, Sc 'E' & Dy. Course Director gave

a brief introduction to the course contents. During the valedictory session, Dr K Nageswara Rao, Director, DESIDOC distributed certificates to the participants and urged them to extensively use the knowledge gained through the course.

## COURSE ON ASMAFT-17

Defence Food Research Laboratory (DFRL), Mysuru organised a four-day course on Advance Supply Chain Management & Food Technology (ASMAFT-17) during 17-20 July 2023. The course was attended by 19 senior Army ASC officers along with Chief Instructor from ASC Centre & College, Bengaluru.

Besides lecture on related topics, the course also included warehouse designing and Mckenna's 4 principles of pest control management and integrated farming. A hands-on training was provided on state-of-the-art and novel food technologies to render comprehensive knowledge to the senior Army



officers in food processing, frozen & chilled meat/chicken, quality control, and management. A visit to Karnataka Milk Federation (KMF) Dairy, Mysore, CFTRI, Mysore, and ITC Foods Pvt Ltd, Nanjangud was also arranged.

Dr Anil Dutt Semwal, Director, DFRL distributed the certificates to the course participants. Dr V Vasudevan, Sc 'E' was the Course Director and the programme ended with a vote of thanks by Dr R Kumar, Sc 'G' & Head, HRD.

## COURSE ON ADVANCES IN MILITARY NUTRITION

A course on 'Recent Advances in Military Nutrition' was held at Defence Food Research Laboratory (DFRL), Mysuru during 10-14 July 2023. The course was inaugurated by Dr Anil Dutt Semwal, Sc 'G' & Director, in the presence of Dr R Kumar, Associate Director, DFRL, and Dr VA Sajeew Kumar, Head-FDAPT Division. Dr T Anand, Course Director welcomed all the participants and briefed them about the course. The faculty comprised speakers from Mysore University, CFTRI, ASC Centre & College, DIPAS, DFRL, and industries. A total of 29 participants from the Army, Navy, Air Force, CRPF, and DRDO laboratories attended the course.



Director, DFRL in his inaugural address stressed the importance of different types of rations and recent developments in the area of military nutrition. The topic covered during the course were human nutrition, bioavailability

& accessibility of micronutrients, combat ration for extreme environments, nutritional requirements of Armed Forces, etc. The course ended with a vote of thanks by Dr N Ilaiyaraja, Sc 'E' & Course Coordinator.

## AVALANCHE AWARENESS TRAINING AT SIACHEN BATTLE SCHOOL BY DGRE MMC SASOMA

Siachen is a snow-bound glaciated region of the Indian Himalayas and is prone to snow, ice avalanches. The mobility of troops and various other activities got severely restricted by these avalanches hampering troops' movement and overall well-being. To enhance troops' preparedness snow-meteorological data collection and avalanche awareness trainings were conducted by officials of DGRE MMC Sasoma during June and July 2023 at Siachen Battle School (SBS), Base Camp to Officers (18 Nos), JCOs (18Nos) and OR (283 Nos) of units undergoing SBS Training before induction to Siachen. Troops were briefed

about the collection of snow and meteorological data, avalanche safety, and rescue procedures, health issues in snow-bound areas, and also about avalanche

and snow awareness. The training will help troops to enhance their preparedness to perform their assignments efficiently in the snowbound region of Siachen.





# COURSE ON ELECTRIC PROPULSION TECHNOLOGIES FOR MARINE VEHICLES

A Continuing Education Programme (CEP) on 'Electric Propulsion Technologies for Marine Vehicles' was organised by Naval Science & Technological Laboratory (NSTL), Visakhapatnam, during 17-21 July 2023. Dr Abraham Varughese, OS & Director NSTL, Shri BVSS Krishna Kumar OS & Sc 'H', Shri ChV Satya Srinivas, Sc 'G', Shri Basam Venkata Rao, Sc 'E' & Course Director inaugurated the course and while sharing the views, Director, NSTL highlighted the current trends in the area of electric propulsion technologies. The course was interactive, wherein the participants got the opportunity to learn about electric propulsion technologies, advanced



energy sources, advanced electric propulsion for ships and motor design, advanced drives, submarines, etc.

## XXX TAMHANKAR MEMORIAL LECTURE

Defence Metallurgical Research Laboratory (DMRL), Hyderabad organised XXX Tamhankar Memorial Lecture in association with Indian Institute of Metals (IIM), Hyderabad Chapter on 28 July 2023 to pay tributes to the unique contributions made by Dr RV Tamhankar in establishing and nurturing two important institutions in the country, viz. Defence Metallurgical Research Laboratory (DMRL) and Mishra Dhatu Nigam Limited (MIDHANI). Dr R Balamuralikrishnan, OS & Director, DMRL welcomed the audience. Dr B Venkataraman, DS & Director, IGCAR delivered the lecture on 'Advanced NDE Techniques for Materials



Evaluation & Characterisation'. Dr Venkataraman emphasised various developments in NDE techniques for inspection of large size components and their applications useful for the aerospace and nuclear programmes.

## TALK ON SOFT SKILLS AT DESIDOC

Defence Scientific Information & Documentation Centre (DESIDOC), Delhi organised a talk on 'Soft Skills for self Development' by Dr K Ramachandran, former Director, Defence Institute of Psychological Research (DIPR), Delhi on 08 August 2023. Dr Ramachandran spoke on the five soft skills, i.e. communication, team work, critical thinking, adaptability, and leadership with real life examples. The talk was not only motivating and inspiring, but also very interactive. Dr K Nageswara Rao, Director, DESIDOC felicitated him with a memento and a shawl as a token of memory. Dr K Ramachandran superannuated on 31 July 2023.



## CAPSULE COURSE ON PROJECT MANAGEMENT AT LRDE

A capsule course on 'Project Management' was conducted by Electronics Research and Development Establishment (LRDE), Bengaluru in association with the Institute of Technology Management (ITM), Mussoorie during 17-19 July 2023. The course had been planned for the benefit of the Project Directors, Deputy Project Directors of LRDE. Shri Gampala Viswam, DS & Director, LRDE inaugurated the course and addressed the gathering.

Shri SA Katti, Director, ITM delivered the keynote address during the course. Smt Anuya Venkatesh, Sc 'E', ITM was the Course Director. Along with LRDE scientists, scientists from



Microwave Tube Research & Bengaluru also attended the Development Centre (MTRDC), course.

# COURSE ON ADVANCED PHYSICAL LAYER TECHNOLOGIES FOR MILITARY APPLICATIONS

A three days CEP course on 'Advanced Physical Layer Technologies for Military Applications' was organised during 10-12 July 2023 at Defence Electronics Applications Laboratory (DEAL), Dehradun. The inaugural function was presided by Shri LC Mangal, Director, DEAL.

The inaugural talk was delivered by Prof K Giridhar, of IIT Madras on 'Stealth Communications for Radios and Satcom' in which he highlighted the factors which influence the waveform design and substantiated it with a case study on Covert Point to Multipoint Links through geo-satellite.

The course was designed to highlight and cover comprehensively the technical



aspects of physical layer design for military communications. Overall, 26 participants registered for the course from various DRDO laboratories.

Experts from Academia (IIT Madras, IIT Roorkee, IIT Kanpur),

Industry (M/s Mathworks, M/s National Instruments, M/s Sysellent, and M/s Keysight), Wireless Planning Commission, DRDO laboratories (LRDE, DYSL-QT, DEAL) delivered very informative and insightful talks.

# VISIT OF SCIENTISTS TO 201 COBRA BN CRPF, JAGDALPUR, CHHATTISGARH

Directorate of Low Intensity Conflicts (DLIC) organised a visit of DRDO scientists to field location of CRPF namely 201 CoBRA Bn, located at Jagdalpur, Chhattisgarh on 04 August 2023. Scientists from TBRL, LRDE, R&DE (E), HEMRL, ARDE, DMSRDE, DEAL, IRDE & DYSL-AT visited the Bn location and presented the DRDO equipment having utility for tasks being carried out by CRPF deployed at Chhattisgarh area. During the presentation-cum-discussion, 29 officers of CRPF participated physically





and through video conferencing. Shri Harjinder Singh, DIG, CRPF welcomed all scientists from DRDO and suggested that CRPF Bn is looking forward to a fruitful discussion on existing DRDO technology.

Shri Sangita Rao Achary Addanki, Director, DLIC elaborated on the objective of the visit, viz to interact and spread

awareness of DRDO developed products to security personnel deployed in field conditions. He emphasized that the aim of the visit is to take valuable feedback on existing DRDO technologies and take user inputs for any future requirements. All scientists gave their presentation to the CRPF personnel attending the meeting. DRDO products namely

Multi-Mode Hand Grenade, Less Lethal Plastic Bullets, Advanced Demolition Device, Counter Drone System, Ground Penetration Radar, Surveillance Using Multi-Layer Intelligent Tracking Response Analysis (SUMITRA), Explosive Detection Kit (EDK), 7.62x51 mm LMG, 5.56x45mm CQB Carbine and 9x19 mm Machine Pistol were discussed.

## SEMINAR ON INFRARED DETECTORS & TECHNOLOGIES AT IRDE

Instruments Research and Development Establishment (IRDE), Dehradun organised a seminar on 'Infrared Detectors & Technologies' on 18 July 2023. The seminar aimed to explore the latest advancements and innovations in the field of infrared detectors, bringing together experts, researchers, and enthusiasts to exchange knowledge and ideas. Dr Ajay Kumar, Director, IRDE inaugurated the seminar.

In his inaugural address, Dr Ajay Kumar highlighted the importance of infrared detectors in modern defence systems and the need for continuous research and development in this critical area. Participants from various DRDO laboratories, DGQA, ISRO, OLF, OFD, BEL & BDL attended the seminar.

Participants' insightful discussions, thought-provoking questions, and diverse perspectives shared during the sessions fulfilled the purpose of organising the seminar. SCD, Israel was host to a series of enlightening presentations by esteemed speakers Dr TuvyMarchovich,



Mr Ram Biron, Mr Shai Fishbein, and Mr Igal Bar Illan. These experts expertly delved into the comprehensive exploration of ongoing infrared detector programs at SCD and shed light on the remarkable progress made so far.

Furthermore, they provided a glimpse into the promising future of SCD with an extensive roadmap that encompasses advancements in SWIR, MWIR, and LWIR

detectors.

Dr Sudhir Khare, Sc 'G', IRDE outlined a comprehensive future road map for the development of Electro-optical systems at IRDE and appreciated the unwavering support from SCD.

At the culmination, organisers extended their heartfelt gratitude to all the speakers and participants for their invaluable contributions to making the seminar a meaningful and fruitful event.

## INSTALLATION AND COMMISSIONING OF 2/6 MV HIGH ENERGY LINAC SYSTEM AT ACEM

A new switchable dual energy 2/6 MV Linac facility was installed and commissioned at Advanced Centre for Energetic Materials (ACEM), Nasik NDT facility. The machine has been designed under the aegis of 'Make in India' and developed indigenously by SAMEER, a Society for Applied Microwave Electronics Engineering and Research under the Ministry of Electronics and Information Technology in a record time of 24 months. True to the spirit of Atmanirbhar Bharat the system will perform to meet the mission of ACEM in delivering flawless solid rocket motors for various strategic missile programmes of the country.

The facility is a new addition to the existing fleet of x-ray machines of the state-of-the-art ACEM NDT facility. The availability of two



energies in a single machine will make the machine more versatile in terms of inspection of a wide range of objects.

Shri TV Jagadeeswar Rao, Sc

'G' & General Manager, ACEM congratulated the SAMEER team and ACEM NDT team for the smooth and timely completion of all the activities.

## INAUGURATION OF GEM CELL AT NSTL

Dr Abraham Varughese, Director, Naval Science & Technological Laboratory (NSTL), Visakhapatnam inaugurated a dedicated GeM Cell, at Materials Management Division (MMD), NSTL on 19 July 2023 in the presence of Dr GV Krishna Kumar, Sc 'G' & GD (MM), Shri D Sreedhar Patnaik, Sc 'F', HoD (MM), which stands in-line with the latest Govt. instructions for enhancement of procurement for goods and services through GeM.

Dr HN Das, Sc 'G', Shri R Srihari, Sc 'G', Ms DR Rajeswari

Devi, Sc 'G', and other officers & staff also attended the event.

The newly set up GeM cell is a part of NSTL's efforts to put in intensive and sustained efforts as a single window to facilitate

procurement of goods & services through the GeM portal to the maximum extent possible as per the provisions of Rule 149 of GFR-2017.







# BLOOD DONATION CAMPS

## ACEM, Nasik

Advanced Centre for Energetic Materials (ACEM), Nasik organised a Blood Donation camp on 11 August 2023 to celebrate 'Raktdaan Amrit Mahotsav' as a part of Azadi ka Amrit Mahotsav in association with Civil Hospital, Nasik. The camp was inaugurated by Shri TV Jagadeeswar Rao, General Manager. He motivated all the donors and promoted that all eligible donors should donate



blood once or twice every year. He appreciated the work of involved officers and medical team of

ACEM and Blood Bank team of Civil Hospital, Nasik.

Blood bank team appreciated the enthusiasm shown by employees to donate blood and conveyed that this blood is not just going to save the life of recipients but also going to improve the health of donors by maintaining good health, blood flow, formation of fresh blood.

## NSTL, Visakhapatnam

A Blood Donation Camp was organised at Naval Science & Technological Laboratory (NSTL), Visakhapatnam as part of the 54th Lab Raising Day Celebrations 2023 on 04 August 2023. The Camp was organised by the Social Service Committee of LRDC-2023 in association with AS Raja Blood Bank, Visakhapatnam.



the voluntary participation of employees of NSTL and applauded the donors. Dr K Aruna & 11 Member Team of AS Raja Blood Bank; and Principal Medical

Officer of NSTL Surgeon Lt Cdr PriggyaRit Roy & Team of NSTL MI Room supervised the camp.

Members of the NSTL Civil Employees Union, Works Committee, JCM IV; and other NSTL personnel participated in the programme.

About 120 NSTL personnel including Director, NSTL, and their family members donated blood and made the event successful.

# CPR TRAINING AT ASL

Advanced Systems Laboratory (ASL), Hyderabad organised one day awareness and training programme on First-Aid & Cardiopulmonary Resuscitation (CPR) on 03 August 2023 in association with Dr Anitha Bhalla, cardiologist and team of doctors from Osmania Medical College. Shri B V Papparao, DS & Director, ASL inaugurated the programme and addressed the gathering. He highlighted the importance of the

CPR and urged the participants to learn it properly and help the people in emergency. Around 160 participants from ASL, CAS, and DYSL-AT were trained.



## Higher Qualifications Acquired



Shri Shital Kumar Garg, Sc 'E', Solid State Physics Laboratory (SSPL), Delhi, was awarded a PhD in July 2023 by Indian Institute of Technology, Delhi for his thesis 'Experimental and Numerical Studies of the Regenerator for a Miniature Stirling Cryocooler'.

## VISITORS TO DRDO LABS

### CASDIC, Bengaluru

**Air Marshal V Rajasekhar**, Director General (Systems), IAF, and Air Vice Marshal K Radhakrishna, Assistant Chief of Air Staff (Systems), IAF visited Combat Aircraft Systems Development & Integration Centre (CASDIC), Bengaluru on 27 July 2023. Dignitaries visited the static display of avionics and EW technologies, PODs, systems & sensors developed by CASDIC & deployed on various combat aircraft of the IAF.



**Air Vice Marshal SN Santosh**, Commandant, Software Development Institute (SDI), IAF, and his team visited CASDIC, Bengaluru on 25 July 2023. Brief on various activities of CASDIC towards the development & integration of combat aircraft systems, current thrust R&D areas & ongoing projects were presented. This was followed by detailed presentations & discussions by Project Directors on the Projects being undertaken by CASDIC in close association with SDI, IAF.



**Commodore Ramesh S Menon**, CMDE (ASE), IHQ, Indian Navy visited CASDIC, Bengaluru on 18 July 2023. During the visit meeting, an overview of previous projects undertaken by CASDIC for different aircraft of the Indian Air Force, Indian Navy & Indian Army was presented.

This was followed by presentations and discussions on current & proposed projects, domain expertise, and technology thrust areas. CMDE (ASE) visited the static display of technologies, systems, sensors & PODs developed by CASDIC and currently deployed on various combat aircraft of IAF.

### DEAL, Dehradun

**Vice Admiral Sandeep Naithani**, AVSM, VSM, Chief of Materiel visited Defence Electronics Application Laboratory (DEAL), Dehradun on 28 July 2023. He was greeted by

Shri Krishan Lal, OS & officiating Director, DEAL. A presentation was given highlighting the DEAL history, developed products, technological advancement, and the roadmap ahead. Vice Admiral Sandeep Naithani provided insightful inputs for the SDR-FA and SHEYN projects. He elaborately discussed the Joint Services Waveform and showed interest in UCS, HEAUV, and ISR projects.

### DG (LS), visits 4 AFSB, Varanasi

**Dr UK Singh**, DS & DG (LS) accompanied by Dr Arunima Gupta, Director, Defence Institute of Psychological Research (DIPR), Delhi visited 4 Air Force Selection Board (AFSB), Varanasi on a familiarisation visit for witnessing Officer Selection System during 09-10 August 2023. The dignitaries visited various technical facilities,



Vice Admiral Sandeep Naithani, AVSM, VSM, Chief of Materiel during his visit at DEAL, Dehradun



were briefed on the various activities being carried out at the Selection Board and also witnessed a demonstration of Computerised Pilot Selection System (CPSS).



### DGRE, Manali

**Dr Samir V Kamat**, Secretary, DD R&D and Chairman, DRDO visited Defence Geoinformatics Research Establishment (DGRE) RDC, Manali on 27 July 2023. He was accompanied by Shri Purushottam Bej, OS & DG (RM), Dr PK Satyawali, OS & Director, DGRE and officials from CC (R&D) Estates, North and EMU, R&D (Estates). He visited the flood affected area of RDC Manali and interacted with DGRE officials. Secretary, DDR&D appreciated the DGRE management for all the

efforts and arrangements made for emergency evacuation and relief camp at 32-Bigha land of DGRE and emphasized the need for meticulous planning to avert such future incidents.



### DIHAR HQ, Leh

**Dr Samir V Kamat**, Secretary, DD R&D & Chairman DRDO visited Defence Institute of High Altitude Research (DIHAR), Leh. During his visit Dr Kamat paid a visit to DIHAR experimental-cum-demonstration fields. Scientists of DIHAR briefed him about the various technologies DIHAR has developed and other potential technologies upon which R&D is being carried out. This was followed by address of the Chairman to all the staff of DIHAR and he had a

detail interaction with them. The Chairman applauded the efforts of DIHAR in making the life of troops and local population better in terms of fresh food availability.

### HEMRL, Pune

**Air Marshal Sandeep Singh**, Military Adviser, NSCS visited High Energy Materials Research Laboratory (HEMRL), Pune on 02 August 2023. During the visit, he interacted with the Director, HEMRL, and senior scientists of HEMRL on the status of projects, technologies & achievements. He visited the Hall of Energy (Exhibition Hall) and showed keen interest in the exhibits and activities of HEMRL. He also visited Multiple Motor Processing Facility at HEMRL and praised about the facility and its importance. He also promised to extend all kinds of support from his office if needed in the future.



### IRDE, Dehradun

**Vice Admiral Sandeep Naithani**, AVSM, VSM, and Chief of Materials, Indian Navy along with his team visited Instruments Research & Development Establishment (IRDE), Dehradun on 28 July 2023. Dr Ajay Kumar, OS & Director, IRDE welcomed Vice Admiral Sandeep Naithani. Dr Ajay Kumar explained to him in detail about the technologies and systems developed by IRDE. Vice



**Dr Samir V Kamat**, Secretary, DD R&D & Chairman DRDO, during his visit at DIHAR, Leh



Admiral Sandeep Naithani took keen interest in these products and technologies. Vice Admiral also visited IRDE Diamond Jubilee Gallery and watched the features of the Gallery. He saw the Technology Area, System Area, Down-the-Memory Lane, and Lab WOW moments in the Gallery. He appreciated the role of IRDE in providing electro-optics solutions for users.



about ongoing projects, developed products, system analysis studies and wargames were made. This was followed by discussion and way ahead on future land wargaming projects.

**Lt Gen Manjinder Singh**, YSM, VSM, DCIDS (PP&FD) visited Institute for Systems Studies and Analyses (ISSA), Delhi on 01 August 2023.



## ISSA, Delhi

**Maj Gen VT Mathew**, VSM, MGGS (Doctrine) HQ ARTRAC visited Institute for Systems Studies and Analyses (ISSA), Delhi on 09 August 2023. Shri SB Taneja, OS & Director ISSA briefed him about the various projects and technical activities. Presentations

Shri SB Taneja, OS & Director, ISSA briefed him about various system analysis activities and wargames at ISSA. Presentations about developed products of system analysis studies and land wargame followed by discussion and way ahead on studies forwarded by HQ IDS were done.

## VRDE, Ahmednagar

**Lt Gen Tumul Varma**, SM, VSM, DG EME & Sr Col Comdt along with Maj Gen RS Sundaram, SM, VSM, MG EME visited Vehicles Research and Development Establishment (VRDE), Ahmednagar on 25 July 2023.

A brief on various ongoing projects of VRDE was given to him. He also interacted with all senior scientists and gave insight into projects required by EME Dte. He was also taken around the National Centre for Automotive Testing (NCAT) and various test tracks along with EMC Test Facility. Equipment displays of WhAP and WhAP CBRN were also shown to him.



Maj Gen VT Mathew, VSM, MGGS (Doctrine) HQ ARTRAC with Director & Sr Scientists of ISSA