## DEPARTMENT OF HUMANITIES AND SCIENCE

### Report on FDP entitled "Three day Faculty Development Programme on Hands on Training for Nanotechnology Research" held on 19-21 Oct.2022

An interactive and activity-oriented three day Faculty Development Programme (FDP) was successfully conducted at Aarupadai Veedu Institute of Technology from 19th – 21st October 2022 jointly by the Physics and Chemistry divisions of the Department of Humanities &Sciences. The FDP received a good response with 21 participants from various Engineering and Science institutions around Chennai.

The programme was inaugurated in the morning at the Digital room VI of AVIT on 19th Oct. 2022 by **Dr. Jennifer G. Joseph, Head of the Department of Humanities and Sciences**of AVIT.**Dr. K. Ganesan**(Chief Guest and a Resource person), Scientist, Indira Gandhi Centre for Atomic Research, **Dr. R. N. Viswanath, FDP- Convener, Dr.R.Nagalakshmi, FDP- coordinator and FDP co-convenorsDr. B. Dhanalakshmi, Dr G. Suresh and DrSuganya GA Josephine** were present at the gathering.

In the technical session, the Chief Guest Dr K. Ganesangave a science lecture on **"Scope of the Nanotechnology in India"**. During the presentation, the guest discussed the types and characteristic features of surface scanning probe microscopy techniques for the mapping of 3D-topography images on atomically smooth surfaces. The guest highlighted with examples, the technological importance of Atomic force microscopy techniques for various engineering disciplines. The guest further outlined how an AFM tip connected to a cantilever scanned over the surface of the flat samples with a small repulsive force present between the sample and the tip. Subsequent to the Guest lecture, the Hands-on training event started for three days. The event details are given in tabular form with sequential order.

On the third day of the FDP, **Dr. R.N. Viswanath** discussed the technical details of Atomic force microscopy techniques with special emphasis on its technological importance. Dr. Viswanath covered the background information about the microscope, advantages and disadvantages of AFM, AFM experimental set-up, force-distance relationship, types of AFM scanning modes, how does AFM works, etc in the tutorial hour. The participants interacted with the experts in all the tutorial sessions and clarified their queries. Finally, the FDP ended at 15.30 IST with a concluding session.