

One day visit to Birla Industrial and Technological Museum, Kolkata for schoolgirls
organized by IEEE Calcutta Section WIE Affinity Group and AP-MTT Chapter
September 3, 2011

Birla Institute and Technological Museum (BITM), Kolkata is a wonderful place to experience the magic of science and technology. We, the members of IEEE Calcutta WIE AG and AP-MTT chapter, along with 85 school students and their 10 teachers visited BITM on September 3, 2011. Students of classes VIII to X from five different schools—Ananda Ashram Vidhyapith, Narkeldanga School, Beliaghata Shanti Sangha, Kamala Girls, Kali Kamala School took part in the visit. For convenience of this group, bus services and lunch were provided.

The first show was a special one on the magic of chemistry organized by BITM on this International Year of Chemistry. A scientific officer of BITM performed many amazing chemical experiments with colorful visual effects. For example, six distinctly colored liquids can be generated from a colorless liquid using different reagents. He created magenta color for holi festival using phenolphthalein and alkali. For weak alkali, the color disappears gradually, whereas for strong alkali, it needs acid solution to remove color. Students visualized that hydrogen balloon bursts with sparks, but no spark is generated for a balloon filled with carbon-dioxide. A battery-connected pen generates violet colored iodine gas at its tip (anode) while brought in touch with a piece of paper coded with potassium iodide. He analyzed chemical aspect of several things of every days use like vinegar, battery, coal. Finally, he performed two brand-new experiments -- one on electrolysis and the other on chemo-luminescence. We were the lucky first group of spectators to watch these.

Next, the students had an opportunity to perceive 3-D vision on screen. A documentary on geographic reality, specifically on a caterpillar's life cycle, sea species and various insects were screened with advanced technology to cause 3D effects in the observer's brain. The show on color television show was also fascinating. The monochromatic background of a digital image was filtered off and replaced by sky background to create impossible images of a person flying in the sky.

In the mathematics gallery, simple tricks of Vedic mathematics for multiplication with numbers of only digit 9, large multiplication, helped the school students to grow interest in mathematics. Several topics of mathematics on fractal, polygons, golden ratio, AP series were displayed in an interactive gallery which was very encouraging for the students. Galleries on radiation, electricity and magnetism, sources of energies drew interests of the students. The visit to BITM with the school students was enjoyable to all of us.