**Report of the Five day workshop titled “Fun with Logic gates and Secrets of Microprocessor ” organized by Physics Department**

Physics Department organized a 5-day workshop titled “Fun with Logic gates and Secrets of Microprocessor” on 4th, 5th, 6th, 7th and 9th of April 2016 for the students of FY and SY BSc students from 8.30am to 1.30pm each day.

The main motive behind the organization was to make the students engage themselves in understanding logic expressions, simplifying them and building the circuits on a bread board. At the same time the students’ ability in understanding programming and developing the logic behind programming was also kept in mind.

Day 1 started off with a lecture by Mr. Kiran Nabar on Number system, conversion of data from one system to another followed by solving varieties of problems including decimal point.

On day 2, logic expressions, rules for using these and simplifying the expressions to a minimal were covered. The use of bread board was explained and the students were made to build circuits on bread board. They were happy when the circuits gave the desired output. Mr.Anand Ambardekar was very enthusiastic in explaining Karnaugh’s maps using Sum of Product(SOP) and product of Sum(POS).

On day 3, they were made to add 2 numbers in decimal, binary and hex systems and they also verified the sum by all methods. For subtraction, 1’s and 2’s complement were introduced to them.

Mr. Mahesh Falake introduced the students to Microprocessor system, the programming model, the flags and various registers. He explained all instructions that were necessary in understanding basic level programming.

Day 4 and 5 saw all smiling faces as these students understood assembly language programming, writing op codes, feeding them into microprocessor kit, checking the output on the display unit and so on and so forth. Logic in writing programs for addition , subtraction, block transfer, sorting etc were explained by Mrs. Pratibha Pai. Students were able to independently load the programs and verify the output.

There were demonstrations of some live projects made by Dr. Vishal dev Ashok too.

On the last day, Principal Dr. Harsha Mehta distributed the certificates to all the participants as well as the resource persons and took the feedback from the students. She appreciated and congratulated the entire teaching faculty and also the non teaching members in making this programme a great success.

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