

(RC-06)

Innovative Experiments in Physics-Fun and Learn

Date: 15 November 2019

Organized By: Department of Physics, Agrawal P. G. College, Jaipur

No of participants: 10 Teachers, 52 students of B.Sc III yr of Agrawal P. G. College.

Resource person: Prof. Y K Vijay(President IAPT-RC6);

The workshop on “**Innovative Experiments in Physics – Fun and Learn**” was organized by Department of Physics, Agrawal P G College, Jaipur. Naman Mathur, MC of the workshop initiated the workshop by welcoming the resource person Dr. Y K Vijay, staff members and participants. The programme started with felicitation of Prof. Vijay by the HOD Dr. Minal Bafna. She in her welcome address threw light on simplicity of such experiments and their role in understanding the concepts of physics. The key theme of the workshop was innovative ideas for experiments conducted in undergraduate physics laboratories to enhance the comprehension and learning of Physics.

First session:- The resource person Dr Y K Vijay initially gave a talk and demonstration of experiments on phenomenon based on light explaining interference, diffraction, dispersion and Tindall effect; and then using simple, coupled and compound pendulum he demonstrated and made the intricate Doppler effect, Rutherford scattering experiments, barrier penetration, crystal defects, etc too simple to understand. After seeing these demonstrations, the students got quite enthralled to learn these complicated concepts and were eager to learn for themselves.

Second Session:- The students were made to perform the experiments by themselves in a group of 4 or 5. Two sets of six innovative experiments were distributed among twelve groups of students supervised by a teacher of the department. The teachers assisted in taking observations and analyzing the experiments. The experiments conducted were –

S.No	Name of experiment	Students group that performed it	Supervising Teacher
1	Study of resistance, current and voltage of bulbs of different wattage connected in series and parallel combinations and estimation of their temperature	(i)Upendra Kr, Harikesh Kumar, Surendra Mahawar, Ajay Kumar, (ii) Aadil Rangrev,Lalit Sharma, Brijesh Sharma, Vinod Saini	Dr. Manjari Gupta
2	Study of diffraction through wire mesh using diode lasers	(i)Vinod Sharma, Mitali Sharma, Vanshika Sharma, Diksha Singh (ii) Shifali Sharma, Pinky Jadon, Vanshika Mahawar, Seeta Meena	Dr. Ankit K Gupta
3	Study of R-L, R-C, LCR circuits using a.c power supply	(i)Aditya Ajmera, Bhupesh Bunker, Ajay Jhangir, Sachin Gurjar, (ii)Priyanka Meena,Rajani Meena, Ujala Sayid, Archana Kav	Neha Garg Manu Faujdar
4	Study of thermal conduction and Newton's law of cooling using soldering iron	(i)Amit Tomar, Shubham Sharma, Gauri Sh Sharma,Lokendra Rawal, Paylet Meena (ii)Mahesh Meena, Harjit Singh,Vivek Nathiya, Ramesh Prajapat, Avinash Garg,	Naman Mathur
5	Study of magnetic interactions using annular ring magnets	(i)Naman Kumar, Vikas Saini, Abishek Rawat, Priyanshu Sain, (ii)Sandeep Tongariya, Vishnu Pratap Singh, Rohan Kumar	Deependra Nitharwal
6	Variation of current with resistance of bulb filament	(i)Md.Afeen, Ashish mahawar, SunnyVerma, Abhishek Mahawar (ii)Naresh Kumar , Narendra Kumar , Anchal, Surendra	Driti Khandelwal Nistha Jain

Third Session:- After the experiments were over, each group of students were asked to present and interact about their work, the difficulties they faced and analysis of the results they obtained. This was the most interactive part and all their queries and doubts were clarified by Dr. Vijay.

Fourth Session: Dr. Minal Bafna proposed the vote of thanks. Dr. Vijay's efforts were well appreciated and applauded by everyone. Students filled the feedback forms where in they expressed that they felt quite satisfied and are eager with such interactive demonstrative approach. They even demanded for further such workshops.

Dr. Minal Bafna
(Co-ordinator)



Pics at Agrawal College