

BBK DAV COLLEGE FOR WOMEN

LAWRENCE ROAD, AMRITSAR [PUNJAB]-INDIA

DEPARTMENT OF PHYSICS

The department of Physics was established in the year 2004 with the commencement of B.Sc (nonmedical) and B.Sc. (computer science) UG courses in the college. The department has two labs and a dark room which are equipped with advanced laboratory equipments and general purpose measuring instruments.

We are grateful to the University Grants Commission for providing financial assistance under the Basic Scientific Research (BSR) scheme. The grant sanctioned by UGC has been used to construct a new physics lab and equip it with a broad range of new and quality based apparatus hence providing a constructive and conducive experimental environment for the students and teachers.



Students performing practicals in Physics Lab

The new and quality based equipments are serving as a helping hand to create a practical aptitude amongst the students, for the subject. Recently purchased equipments such as digital micrometers, digital multimeters, digital vernier callipers, RMS AC Millivolt meters, Function generators, Planck's constant, Regulated Power supplies are helpful in the practicals of B.Sc (I, II, III). Analog Lab Trainers with inbuilt dc regulated power supplies, function generator, ac supply, breadboard strips etc. are advanced lab trainers for students to perform more than 50 experiments of analog electronics. Breadboard trainers equipped with power supplies are also helpful to perform a variety of electronics practicals on a single board. The Hydrogen spectrum apparatus with a high quality spectrometer is making visualize the spectrum of the hydrogen gas. Electronic balance of high quality has been purchased to fulfil the measuring requirements of some BSc-II practicals.

Previously purchased equipments such as Cathode Ray Oscilloscopes, Geiger Muller Counter, Quincke's Tube apparatus, Hall Effect apparatus, Transistors, Operational Amplifiers, Spectrometers, He-Ne Laser, telescopes, Servo-Stabilizers are meeting the practical needs of the students. CRO is the most versatile and widely used electronic test instrument, which allows the signal voltages to be viewed and analyzed. High quality decade Capacitance and inductance boxes have been purchased which are standard laboratory tools to fulfil the requirement of different values of standard capacitance and inductance. The purchased descriptive charts have been influential in making teaching more effective. The Quincke's Tube apparatus has been helpful in the measurement of magnetic susceptibility of paramagnetic solutions. The GM counter is helpful to detect the radiations emitted by different sources.

A major amount of the grant has been used for renovation of lab, which includes woodwork, flooring, almirahs, chairs etc. The new lab has been equipped with a geyser to meet the hot water requirement of some practicals. A computer cabin has been constructed in the lab, which will be helpful for the practical purpose as well as for research.

Facilities Developed

1. Cathode Ray Oscilloscopes (MARS) ME-3030
2. Cathode Ray Oscilloscopes SCIENTECH (Caddo-821)
3. Hall Effect Apparatus (SCIENTIFIC EQUIPMENTS, ROORKEE)
4. Quincke's tube apparatus (SCIENTIFIC EQUIPMENTS, ROORKEE)
5. Four Probe Method (DFP-02) (SCIENTIFIC EQUIPMENTS, ROORKEE)
6. Hysteresis Loop Apparatus (SCIENTIFIC EQUIPMENTS, ROORKEE)
7. G.M. Counter (GC-601A) NUCLEONIX
8. Sextant apparatus (MARS) ME831
9. Function generators (FG-01) (SCIENTIFIC EQUIPMENTS, ROORKEE)
10. Polarimeters (OSAW)
11. Newton Ring Experiment (MARS)
12. Fresnel Biprism (MARS)
13. He-Ne Laser Experiment (MARS)
14. Ionization Potential of Mercury (MARS)
15. Hybrid Parameters of Transistors (MARS)
16. Anderson Bridge (MARS)
17. Desauty Bridge (MARS)
18. Carey Foster Bridge (MARS)
19. Soldering Kit
20. Series Parallel LCR circuit (MARS)
21. Planck's Constant Apparatus (MARS)
22. Mercury Vapour Lamps (MARS)
23. Digital Microvoltmeter
24. Spectrometer (OSAW)
25. Sodium Vapour Lamp (MARS)
26. Power Supply (OSAW) (SD 3010)
27. Power Supply (OSAW) (DD 3010)

28. Flashing and Quenching of neon lamp MARS(ME 565)
29. LCR Impedance Apparatus MARS (ME 572D)
30. Lissajous figures Apparatus MARS (ME 822)
31. Thermistor MARS (ME 546D)
32. Nodal Slide Assembly MARS (ME 853)
33. Melde's Apparatus MARS (ME 857)
34. Decade Capacitance box MARS (ME 314)
35. Decade Inductance box MARS (ME 324)
36. Heat efficiency of electric kettle MARS (ME 828)
37. Digital multimeters MARS (VC 97)
38. Zener Diode Characteristics Apparatus MARS (ME 542RFD)
39. Voltage Stabilization of Zener diode MARS (ME 542D)
40. FET Characteristics Apparatus MARS (ME 535D)
41. Absorption spectra of iodine OSAW (23319)
42. Study of various transistors OSAW (BUPT 4)
43. Study of oscillators OSAW-(OSC 12)
44. Study of operational amplifiers OSAW (OPA 3)
45. A.C. Voltmeter (0- 100 V) OSAW (28048)
46. Telescopes OSAW (20353)
47. Diffraction Grating (15000 LPI) OSAW
48. Weighing Scale (Citizen)
49. Electromagnetic Induction Apparatus
50. Lee's charlton conductivity apparatus
51. Stop Watches
52. Prisms
53. Servo Stabilizer MARS (5kVA)
54. True RMS Millivoltmeter SES ACM-103
55. Planck's constant apparatus SES PE101
56. Regulated power supply SES PS-12
57. Study of hybrid parameters of transition SES HP-01

58. Franck hertz apparatus SES FH-3001
59. Digital nanometres DNM-121
60. Digital AC Millivoltmeter MARS ME 258
61. Analog Lab Trainer MARS ME 1153
62. Breadboard with Power supply MARS ME 1150
63. Vernier Calliper with digital meter 0-150*0.01mm MARS 200-196
64. Digital micrometer with digital meter 0-25*0.001mm MARS 200-521
65. Dimmerstat variac ME 2300,ME 2301
66. Electronics balance citizen CY-220 (0.001g)
67. Lab Gezer Crompton greaves(25 lt)
68. Desktop Computer (Dell Optiplex 390)

69. BIOVISUAL Charts
 - I. P10 Nuclear Radiation detector-I
 - II. P11 Nuclear Radiation detector-II
 - III. P17 Atomic reactor
 - IV. P18 Cathode ray oscilloscope
 - V. P28 Lasers
 - VI. P37 Image of lens and mirror
 - VII. P40 Filters
 - VIII. P43 Oscillators
 - IX. P57 Amplifier feedback
 - X. P68 Nuclear power Plant

A thriving and evolving department, we believe strongly in cultivating the conceptual approach with an inclination for research. This underlines the need for a variety of both conventional and more sophisticated equipments in the department. We also aim to achieve smart classrooms and labs, which will help in the creation of new student centric learning environments.

We are grateful to UGC for providing financial assistance to department of physics, which is serving as a helping hand for the students to discover and strengthen their capabilities about different practical aspects of physics.
