

Acharya B. N. Seal College, Cooch Behar

Department of Physics

Tender List 2016-17

Equipments

Sl. No.	Instruments	Specification
1	Strong Bar Magnet	Small size
2	Experimental set-up for determination of capacitance of a capacitor by Wien bridge oscillator	Good make
3	Expt. set-up of determination of rigidity modulus of the material of a wire by static method	For B.Sc. General Course
4	He-discharge tube power supply	
5	He/Hg discharge tube	22 cm in length (approx.)
6	p-n junction diode and Zener diode experimental set-up	For B.Sc. General Course and for Honours course (with Ge and Si diodes)
7	Function Generator	Sine, Square, Triangular Pulse (2MHz/3Mhz) (Model FG-01 SES or Model SM5074 Scientific preferred)
8	AC milli-voltmeter	SES Model ACM – 102 preferred
9	Voltage stabiliser	
10	Lamp and scale arrangement for ballistic galvanometer experiments	
11	Platinum resistance thermometer experimental set-up	
12	Potential divider arrangement (pot)	
13	Experimental set-up to study half and full wave rectification with and without C filter	With AC source of -12-0-+12 V output, Bread board, digital DC Voltmeter (Range: 50V), milliammeter (range: 100mA), variable load.
14	OP AMP experimental set-up	
15	IC 741C for OP AMP experiments	Good quality
16	Prisms	Crown glass
17	Spherometer (Steel/ Brass)	Good quality
18	Regulated power supply	
19	Thermocouple	Copper-constantan
20	Experimental set-up for measurement of thermal	

	conductivity of glass in the form of a tube	
21	Experimental kit to study series and parallel resonance L-C-R circuit	With inbuilt variable AC source, Resistance (50 Ω , 100 Ω , 200 Ω), Capacitances (0.22 μ F, 0.47 μ F, 0.1 μ F), Inductors (10, 30 mH), digital AC voltmeter (capable of recording output V_R , V_C , V_L and input AC voltage), digital meter to record frequency of the input, digital milliammeter, bread board.
22	Spirit level	Brass (2 inch)
23	Meter bridge for electrical expt.	
24	Expt. set-up for determination of surface tension of a liquid by Jaeger's method	
25	Screw gauge	
26	Rubber tube for thermal conductivity expt.	8 mm bore, good quality
27	Connecting wires	Copper (Soft)
28	Hook-up wire for connection to breadboard	Single gauge
29	Digital watch/Stop clock	Good make
30	Transistors for electronic experiments	CL 100
31	Zener diode	Breakdown voltage: 5.6 volts, 12 volts
32	Experimental set-up for determining viscosity of water by Poiseuille's method	
33	Experimental set-up for measurement of surface tension of liquid by capillary ascent method	
34	Polarimeter tube	Good make
35	Slide callipers	Steel/ Brass
36	Cradle and suspension wire in glass housing for vibration magnetometer for determination of horizontal component of Earth's magnetic field	
37	Experimental set-up for determination of refractive index of liquid by pin and stand method	
38	Optical lever experimental set-up	Good quality
39	Voltmeter for determination of ECE of silver	
40	Jockey for electrical experiment	
41	Three-way key for electrical	

	experiment	
42	Discharge key for electrical experiment	
43	Pohl commutator/rocker for electrical experiment	
44	Anderson bridge experimental set-up	
45	Experimental set-up for transistor amplifier in CE and CB mode	
46	Experimental set-up for determination of Y by Searle's method	
47	Spring balance	Good quality
48	Tuning fork	Good quality
49	Standard weights	500 gm, 1 kg
50	Experimental set-up for determining viscosity of water by Stokes' method	Good quality
51	Experimental set-up for determination of mechanical equivalent of heat (J)	Good quality

Repairing of Equipments/Intruments/Computers

Travelling microscopes, ballistic galvanometers, power supplies, electronic board experiments, computers and laptops.

Computers

Sl no.	Items	Piece(s)
1	HP laserjet P1108 cartridge (compatible)	5
2	HP 20 C010 IL 19.5 inch (Pentium J3710/4 GB/1TB/Dos/int graphics) desktop	1
3	HP pendrive (32 GB)	2
4	HP scanner/printer/copier	1
5	Wireless mouse	3
6	Antivirus QUICK HEAL 5 user/2 years	1

Chemical and Glassware

Sl. No.	Items	Specification
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1	Mercury	Pure
2	Sucrose	Good quality
3	Spirit (solvent)	For lamp
4	Round bottomed flask for platinum resistance thermometer experiment	With long neck
5	Castor Oil	Pure
6	AgNO ₃ (silver nitrate)	Pure

List of Books

1. Mathematical Methods in Physical Sciences (3rd edn.) – Mary L. Boas (paperback, if available).
2. Introduction to Electrodynamics (4th edn.) – D. J. Griffiths (Wiley Student Edition) (paperback)
3. Direct Nuclear Reactions – Norman K. Glendenning (World Scientific)
4. Quantum Mechanics – L. I. Schiff (McGraw-Hill)
5. Quantum Mechanics - J. L. Powell & B. Crasemann (Addison-Wesley)
6. Relativistic Quantum Mechanics – Bjorken and Drell (Pearson)
7. Quantum Field Theory – Peskin and Schroeder (paperback, if available).
8. Quantum Field Theory (2nd edn.) – F. Mandl and G. Shaw (Wiley)
9. Applied Mathematics for Engineers & Physics – Pipes and Harvill
10. Electricity & Magnetism – W. K. H. Panofsky and M. Philips (Dover Books on Physics)
11. Introduction to Nuclear Physics – H. Enge
12. Theoretical Nuclear Physics – J. M. Blatt and V. F. Weisskopf (John Wiley)
13. Nuclear Physics (Theory and Experiment) – B P Roy and R R Nigam (paperback)
14. The Modern Theory of Solids – F Seitz (Dover)
15. Quantum Field Theory - C Itzykson & J B Zuber (McGraw-Hill)
16. Electronics fundamentals and Applications - Chattapadhyay & Rakhshit (New Age Publications)
17. Fundamental Principles of Electronics – B Ghosh (Books and Allied)
18. Acoustics – B Ghosh (Sreedhar Prakashani)
19. Nuclear Physics Experiments – J Varma (East West Academic Books LLC)
20. Concepts in Nuclear Physics – B L Cohen (McGraw-Hill series in Fundamental Physics) (paperback)
21. Electronic Device and Circuit Theory – R L Boyelstad and L Nashelsky (Prentice Hall)
22. Acoustics Waves & Oscillations – S N Sen (New Age)
23. Solid State Physics - M A Wahab (Narosa)
24. Principles of Atomic Spectra – B W Shore and D H Menzel (Wiley)
25. Atomic and Molecular Spectroscopy – M C Gupta
26. Advanced Practical Physics – B. L. Worsnop & H. T. Flint
27. College Physics (Vols. 1, 2 & 3) (in English and Bengali) – N K Sinha and D C Dassarma

28. Electricity & Magnetism for Degree Students – S G Starling & A J Woodall (Paperback, if available)
29. Introduction to Atomic & Nuclear Physics (5e) – H Semat (Springer) (Paperback)
30. Nuclear and Particle Physics – W E Burcham & M Jobes (Pearson)
31. Paramanu Kendrak : Gathan o Porichoi (in Bengali) – S N Ghoshal (Paschimbanga Rajya Pustak Parshad)
32. Paramanu o Kendrin (in Bengali) - Debdas Bandyopadhyay (Paschimbanga Rajya Pustak Parshad)
33. Alice in Quantum Land – R Gilmore
34. Dirac & Feynman - Dutta & Ray
35. Text Book on Quantum Mechanics (2e) – P M Mathews & K Venkatesan
36. Modern Quantum Mechanics – J J Sakurai (Addison-Wesley) (Paperback)
37. Advanced Quantum Mechanics – J J Sakurai (Addison-Wesley) (Paperback)
38. Quantum Mechanics - F Schwabl (Springer) (Paperback)
39. Advanced Practical Physics (Vol. I) – B Ghosh and K G Mazumdar (Sreedhar Prakashani)
40. Advanced Practical Physics (Vol. II) – B Ghosh (Sreedhar Prakashani)
41. Parikshamulak Padarthabijnan – B Ghosh (Sreedhar Prakashani)
42. Basic Ideas and Concepts in Nuclear Physics (3rd edn.) - K Heyde (Taylor and Francis, Inc.)
43. Snatak Padarthabijnan (in Bengali) (Vols. I and II) – Chittaranjan Dasgupta (Book Syndicate Pvt. Ltd.)
44. Classical Dynamics of Particles and Systems – Marion and Thornton
45. Mathematical Physics – Charlie Harper
46. Electronic Devices and Circuits – N. Salivahanan
47. Introduction to Nuclear and Particle Physics – Mittal, Verma, Mittal
48. Sound – K. G. Mazumdar
49. Classical Mechanics – David Morin
50. Thermal Physics – Garg, Bansal & Ghosh
51. Electronics – Kulshrestha, Bhargava
52. Space-time Physics – Taylor and Wheeler
53. Concepts of Nuclear Physics – S P Kuila
54. A Treatise on Heat – Saha and Srivastava