

GANESH INSTITUTE OF ENGINEERING AND TECHNOLOGY, POLYTECHNIC

DEPARTMENT OF BASIC SCIENCE AND HUMANITIES

Miss Suchismita Dalai

LESSON PLAN CUM PROGRESS REPORT

SUBJECT: APPLIED PHYSICS-II				SEMESTER : 2nd			BRANCH- ALL BRANCH		
LECTURE NO.	CO	BTL	TOPIC TO BE COVERED	BOOK NAME	WEB REFERENCE IF ANY	TEACHING LEARNING METHOD	PLAN DATE	ACTION DATE	REVIEW BY HOD
1	1	1	Wave motion, transverse and longitudinal waves with examples, definitions of wave, velocity, frequency and wave length and their relationship	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/zzEJ1ggnoIo?si=028JIT1-X3HovRL9	1-Introduction to physics-5 min 2-Pre-requisites for physics-PPT/Smart board-10 min 3-Syllabus & CO discussion-10 min 4-Lecturer-35 min	09-01-2026		
2	1	1	Sound and light waves and, their properties, wave equation ($y = r \sin t$) amplitude, phase, phase difference	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/zzEJ1ggnoIo?si=028JIT1-X3HovRL9	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	10-01-2026		
3	1	3	Principle of superposition of waves and beat formation.	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/zzEJ1ggnoIo?si=028JIT1-X3HovRL9	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	12-01-2026		
4	1	2	Simple Harmonic Motion (SHM): definition, expression for displacement, velocity, acceleration, time period, frequency etc.	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/SFN19JP0qfw?si=xgGztegNX0Vt16uY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	13-01-2026		
5	1	3	Simple harmonic progressive wave and energy transfer, study of vibration of cantilever and determination of its time period	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/SFN19JP0qfw?si=xgGztegNX0Vt16uY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	15-01-2026		

6	1	2	Free, forced and resonant vibrations with examples. Acoustics of buildings reverberation, reverberation time).	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/SFN19JP0qfw?si=xgGz tegNX0Vt16uY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3- Assignment-10 min	16-01-2026		
7	1	2	echo, noise, coefficient of absorption of sound, methods to control reverberation time and their applications	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/YhpH8-H2AKo?si=Ur8CBd2pTrprqZtD	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	17-01-2026		
8	1	2	Ultrasonic waves – Introduction and properties, engineering and medical applications of ultrasonic	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/YhpH8-H2AKo?si=Ur8CBd2pTrprqZtD	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	19-01-2026		
9	2	2	Basic optical laws; reflection and refraction, refractive index	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/kHVAK96r05Y?si=xIE4M9H4diY1t23X	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	20-01-2026		
10	2	3	Images and image formation by mirrors, lens and thin lenses, lens formula, power of lens	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/kHVAK96r05Y?si=xIE4M9H4diY1t23X	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	21-01-2026		
11	2	3	Magnification and defects. Total internal reflection, Critical angle and conditions for total internal reflection, applications of total internal reflection in optical fiber	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/kHVAK96r05Y?si=xIE4M9H4diY1t23X	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	22-01-2026		
12	2	3	simple and compound microscope, astronomical telescope in ,normal adjustment	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/-QIximwdKYI?si=yF174WGySgqWGXD	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	24-01-2026		

13	2	2	magnifying power, resolving power, uses of microscope and telescope, optical projection systems	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/-QIximwdKYI?si=yrF174WGYsSqWGXD	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	27-01-2026		
14	3	2	Coulombs law, unit of charge, Electric field	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/jJLS3PudXM8?si=xM3SunI00ZG6CQIW	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	28-01-2026		
15	3	2	Electric lines of force and their properties	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/StwUNDxdw2c?si=SvQcF7nZpgTbRQ8i	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer- 30 min 4-Doubts Clearing-10 min	29-01-2026		
16	3	2	Electric flux, Electric potential and potential difference .	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/StwUNDxdw2c?si=SvQcF7nZpgTbRQ8i	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	30-01-2026		
17	3	1	Gauss law: Application of Gauss law to find electric field intensity of straight charged conductor	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/StwUNDxdw2c?si=SvQcF7nZpgTbRQ8i	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Assignment-10 min	31-01-2026		
18	3	2	plane charged sheet and charged sphere	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/StwUNDxdw2c?si=SvQcF7nZpgTbRQ8i	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	02-02-2026		
19	3	2	Capacitor and its working, Types of capacitors, Capacitance and its units	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/StwUNDxdw2c?si=SvQcF7nZpgTbRQ8i	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	03-02-2026		
20	3	2	Capacitance of a parallel plate capacitor, Series and parallel combination of capacitors (related numericals)	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/StwUNDxdw2c?si=SvQcF7nZpgTbRQ8i	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	04-02-2026		
21	3	2	dielectric and its effect on capacitance, dielectric break down	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/StwUNDxdw2c?si=SvQcF7nZpgTbRQ8i	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	05-02-2026		

22	4	2	Electric Current and its units, Direct and alternating current	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	06-02-2026		
23	4	3	Resistance and its units, Specific resistance, Conductance, Specific conductance	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	07-02-2026		
24	4	3	Series and parallel combination of resistances. Factors affecting resistance of a wire	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	09-02-2026		
25	4	2	carbon resistances and colour coding	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	10-02-2026		
26	4	4	Ohm's law and its verification, Kirchoff's laws	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	11-02-2026		
27	4	3	Wheatstone bridge and its applications (slide wire bridge only)	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	12-02-2026		
28	4	1	Concept of terminal potential difference and Electromotive force (EMF)	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3- Assignment-10 min	13-02-2026		
29	4	4	Heating effect of current, Electric power	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	14-02-2026		
30	4	2	Electric energy and its units (related numerical problems)	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SlAgRci3pDUlx	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	16-02-2026		

31	4	2	Advantages of Electric Energy over other forms of energy	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/t-yynBAts_1?si=jr7SIaGRci3pDUlx	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	17-02-2026		
32	5	2	Types of magnetic materials; dia, para and ferromagnetic with their properties	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/5VLSi3Kql6A?si=5Cm2CTI9ILm9iH0v	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	18-02-2026		
33	5	1	Magnetic field and its units, magnetic intensity, magnetic lines of force	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/5VLSi3Kql6A?si=5Cm2CTI9ILm9iH0v	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	19-02-2026		
34	5	2	Magnetic flux and units, magnetization.	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/5VLSi3Kql6A?si=5Cm2CTI9ILm9iH0v	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	20-02-2026		
35	5	2	Concept of electromagnetic induction, Faraday's Laws	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/5VLSi3Kql6A?si=5Cm2CTI9ILm9iH0v	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	21-02-2026		
36	5	2	Lorentz force (force on moving charge in magnetic field). Force on current carrying conductor	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/5VLSi3Kql6A?si=5Cm2CTI9ILm9iH0v	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	23-02-2026		
37	5	2	force on rectangular coil placed in magnetic field	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/5VLSi3Kql6A?si=5Cm2CTI9ILm9iH0v	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	24-02-2026		
38	5	2	Moving coil galvanometer; principle, construction and working	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/5VLSi3Kql6A?si=5Cm2CTI9ILm9iH0v	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	25-02-2026		

39	5	2	Conversion of a galvanometer into ammeter and voltmeter	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/5VLSi3Kql6A?si=5Cm2CTI9ILm9iH0v	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	26-02-2026		
40	6	2	Energy bands in solids, Types of materials (insulator, semi-conductor, conductor), intrinsic and extrinsic semiconductors,	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/03PgdzPn-XE?si=sEWHxy5ISTBizvZY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	27-02-2026		
41	6	1	p-n junction, junction diode and V-I characteristics, types of junction diodes.	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/03PgdzPn-XE?si=sEWHxy5ISTBizvZY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	28-02-2026		
42	6	1	Diode as rectifier – half wave and full wave rectifier (centre taped).	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/03PgdzPn-XE?si=sEWHxy5ISTBizvZY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	02-03-2026		
43	6	2	Transistor; description and three terminals, Types- pnp and npn, some electronic applications	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/03PgdzPn-XE?si=sEWHxy5ISTBizvZY	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	05-03-2026		
44	6	2	Photocells, Solar cells; working principle and engineering application.	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/03PgdzPn-XE?si=sEWHxy5ISTBizvZY	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	06-03-2026		
45	6	2	Lasers: Energy levels, ionization and excitation potentials;	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	07-03-2026		
46	6	2	spontaneous and stimulated emission	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2-Lecturer-45 min 3- Assignment-10 min	09-03-2026		

47	6	2	population inversion, pumping methods, optical feedback	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 3-Lecturer-30 min 4-Doubts Clearing-10 min	10-03-2026		
48	6	3	Types of lasers; Ruby, HeNe and semiconductor	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	11-03-2026		
49	6	2	laser characteristics, engineering and medical applications of lasers..	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	12-03-2026		
50	6	2	Fiber Optics: Introduction to optical fibers	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	13-03-2026		
51	6	3	light propagation, acceptance angle	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	14-03-2026		
52	6	2	numerical aperture, fiber types	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2- PPT/Smart board-15 min 2-Lecturer-30 min 3-Doubts Clearing-10 min	16-03-2026		
53	6	2	applications in; telecommunication, medical and sensors	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://www.youtube.com/live/ebOF14qP21k?si=u7FkVxRvuKqo-9Zj	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	17-03-2026		
54	6	2	Nanoscience and Nanotechnology: Introduction	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/OEWCqCIsFOA?si=KBPPrOBLS-zH5N13	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	18-03-2026		

55	6	2	Nanoscience and Nanotechnology: Introduction	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/0EWCqClSFOA?si=KBPPrOBLS-zH5N13	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	19-03-2026		
56	6	2	nanoparticles and nanomaterials	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/0EWCqClSFOA?si=KBPPrOBLS-zH5N13	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	20-03-2026		
57	6	4	properties at nanoscale, nanotechnology	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/0EWCqClSFOA?si=KBPPrOBLS-zH5N13	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	23-03-2026		
58	6	2	properties at nanoscale, nanotechnology	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/0EWCqClSFOA?si=KBPPrOBLS-zH5N13	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	24-03-2026		
59	6	3	nanotechnology based devices and applications	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/0EWCqClSFOA?si=KBPPrOBLS-zH5N13	1-Previous class topic Review-5 min 2-Lecturer-45 min 3-Doubts Clearing-10 min	25-03-2026		
60	6	2	nanotechnology based devices and applications	Text Book on applied Physics-II by K.N. Sharma, Biswambhar Mohanty & Debasis Das.	https://youtu.be/0EWCqClSFOA?si=KBPPrOBLS-zH5N13	1-Previous class topic Review-5 min 2-Lecturer-45 min 3- Assignment-10 min	26-03-2026		

Principal

Faculty

HOD