Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
1	1	Unit of Physical quantity, fundamental & derived quantity.	Engg. Physics & Self Notes	A2		
2	1	unit System, CGS, MKS, FPS unit, SI unit & their advantages / disadvantages.	〃			
3	1	seven bases & supplementary units,	〃			
4	1	dimensional analysis, dimn analysis, dimn formula & dimn equation,	〃			
5	1	Application of dimn equation. - ① & ②	〃			
6	1	Application of dimn formula - ③	〃			
7	1	Application of dimn formula - ④	〃			
8	1	measurement, Accuracy & Precision.	〃			
9	1	error & error analysis, absolute, Relative, & Percentages error.	〃			
10	1	Significance figure & rounding off.	〃			
11	2	forces & their types, conservative & non-conservative forces.	〃			
12	2	frictional forces & their types.	〃			

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
13	2.	Advantages & disadvantages of friction, centripetal & centrifugal forces, grav. acc.	Engg. Physics & self Notes	— NA —		
14	2.	Relation b/w g & G. & diff b/w g & G.	—"—	—"—		
15	2.	factors affecting gravitational acc.	—"—	—"—		
16	2.	Elasticity, hookes Law, elastic limit, elastic fatigue.	—"—	—"—		
17	2.	modulus of elasticity, types of elasticity. Young modulus, Bulk modulus & modulus of rigidity.	—"—	—"—		
18	2.	Surface tension, surface energy, cohesive & adhesive forces,	—"—	—"—		
19	2.	excess pressure inside liquid drop & Soap bubble.	—"—	—"—		
20	2.	Viscosity, coefficient of viscosity. Newton's law of viscosity.	—"—	—"—		
21	2.	Streamline & turbulent flow, Reynolds no.	—"—	—"—		
22	2	Poissulee's equation, Stokes Law	—"—	—"—		
23	3	Refraction, laws of refraction, refractive index & their kinds	—"—	—"—		
24	3	lens & related important terms. used	—"—	—"—		

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
25	3	Refraction of light through prism & spectrum.	Engg Physics & Self Notes	—"—	—	
26	3	Total internal reflection of light, application of TIR.	—"—	—"—	—	
27	3	Optical instrument & their types. simple microscope.	—"—	—"—	—	
28	3	Compound microscope.	—"—	—"—	—	
29	3	Spectrum, pure & impure spectrum visible range.	—"—	—"—	—	
30	4	electrostatics & magnetism — coulomb inverse square law,	—"—	—"—	—	
31	4	charge & their units; electric field, electric potential.	—"—	—"—	—	
32	4	equipotential surface & their properties.	—"—	—"—	—	
33	4	dielectric & their types, polar & non-polar dielectric	—"—	—"—	—	
34	4	capacity, unit, principle of capacitor	—"—	—"—	—	
35	4	parallel plate capacitor, factors effecting capacity.	—"—	—"—	—	
36	4	parallel plate capacity & derivation for their capacity.	—"—	—"—	—	

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
37	4	Spherical capacitor & their derivation for capacity of capacitor.	Engg. Physics & Notes	— " —		
38	4	magnetic induction, magnetic line of force	— " —	— " —		
39	4	current electricity, resistance, specific resistance.	— " —	— " —		
40	4	Series & parallel combination of resistance	— " —	— " —		
41	4	internal resistance of cell, pot. diff. & emf of cell.	— " —	— " —		
42	4	combination of cell, series & parallel combination	— " —	— " —		
43	4	Simple application of wheatstone bridge	— " —	— " —		
44	4	meter bridge & potentiometer	— " —	— " —		
45	4	electrical power	— " —	— " —		
46	5	Photo-electric effect & photo-electric laws.	— " —	— " —		
47	5	Photoelectric equation & threshold freq. photo cell & types.	— " —	— " —		
48	5	Photo-voltaic cell, photo-conductive cell.	— " —	— " —		
49	5	Photo-emissive cell, applications of photo-cell.	— " —	— " —		

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
50	5	X-ray. introduction, properties & uses.	Engg. Physics & Self Notes			
51	5	Production method of X-ray, Gas filled X-ray tube method.	—"—			
52	5	Modern method of X-ray production, - coolidge tube.	—"—			
53	5	Laser, introduction, spontaneous & stimulated emission,	—"—			
54	5	optical pumping, population inversion, active system.	—"—			
55	5	Production method of laser - Ruby - Laser.	—"—			
56	5	Production method of Laser - semiconductor laser.	—"—			
57	5	ultrasonic waves, frequency ranges & introduction of ultrasonic waves.	—"—			
58	5	Production method of ultrasonic waves, uses of ultrasonic waves.	—"—			
59	5	Production method of ultrasonic waves, magnetostriction - method.	—"—			
60	5	Production method of ultrasonic waves piezo-electric method.	—"—			
61	5	Revision - Unit - 1	—"—			
62	5	Revision - Unit - 1	—"—			

Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource
63	5	Revision - unit-1	Engg. Physics & self Notes			
64	5	Revision - unit-2	〃			
65	5	Revision - unit-2	〃			
66	5	Revision - unit-3	〃			
67	5	Revision - unit-4	〃			
68	5	Revision - Unit-5	〃			
69	5	Revision - Unit-5	〃			
66						
69						

Signature of Lecturer

Signature of HOD