

Lesson Plan

Name of the Associate Professor- Ms. Poonam

Subject- Physics

Lesson Plan- 17 Weeks (January-April 2018)

Week	Date	Class B.Sc.-VI Semester (Sec-A) Solid State Physics	Class B.SC.-II semester (Sec-A) Electronic devices
1.	1-Jan-18	Crystalline and glassy forms	
	2-Jan-18	liquid crystals, crystal structure	
	3-Jan-18	Periodicity, lattice and basis, crystal translational vectors and axes	
	4-Jan-18		Discussion of basic terms used in unit
	5-Jan-18	Holiday	
	6-Jan-18		Energy bands in solids
	7-Jan-18	Sunday	
2.	8-Jan-18	Unit cell and Primitive Cell	
	9-Jan-18	Unit cell and Primitive Cell	
	10-Jan-18	Winger Seitz, primitive Cell, Symmetry operations for a two dimensional crystal	
	11-Jan-18		carrier mobility and electrical resistivity of semiconductor
	12-Jan-18		hall effect
	13-Jan-18		p-n junction diode & their characteristics
	14-Jan-18	Sunday	
3.	15-Jan-18	Bravais lattices in two and three dimensions	
	16-Jan-18	Crystal planes and Miller indices	
	17-Jan-18	Interplaner spacing	
	18-Jan-18		zener and avalanche breakdown & zener diode
	19-Jan-18		zener diode as a voltage regulator
	20-Jan-18		Light emitting diodes (LED), Photoconduction in semiconductors
	21-Jan-18	Sunday	
4.	22-Jan-18	Vasant Panchami	
	23-Jan-18	Crystal structures of Zinc Sulphide	
	24-Jan-18	Sir Chotu Ram Jayanti	
	25-Jan-18		Photodiode, Solar Cell,
	26-Jan-18	Republic Day	
	27-Jan-18		p-n junction as a rectifier, half wave and full wave rectifiers (with derivation),
	28-Jan-18	Sunday	
5.	29-Jan-18	Sodium Chloride and Diamond	

	30-Jan-18	X-ray diffraction	
	31-Jan-18	Guru Ravi Das Birthday	
	1-Feb-18		series inductor filter, shunt capacitance filter
	2-Feb-18		L-section or choke filter, -filter
	3-Feb-18		R.C. filter circuits
	4-Feb-18	Sunday	
6.	5-Feb-18	Bragg's Law	
	6-Feb-18	Experimental X-ray diffraction methods	
	7-Feb-18	K-space and reciprocal lattice and its physical significance	
	8-Feb-18		Problem discussion of unit 1
	9-Feb-18		Unit -1 Test
	10-Feb-18	Maharishi Dayanand Saraswati Jayanti	
	11-Feb-18	Sunday	
7.	12-Feb-18	Reciprocal lattice vectors	
	13-Feb-18	Maha Shivratri	
	14-Feb-18	Reciprocal lattice to a simple cubic lattice	
	15-Feb-18		Junction transistors
	16-Feb-18		Working of NPN and PNP transistors
	17-Feb-18		Three configurations of transistor (C-B, C-E, C-C modes),
	18-Feb-18	Sunday	
8.	19-Feb-18	Reciprocal lattice to a simple cubic lattice	
	20-Feb-18	Reciprocal lattice to a, b.c.c. and f.c.c	
	21-Feb-18	Unit test-2	
	22-Feb-18		Common base, common emitter and common collector characteristics of transistor
	23-Feb-18		Constants of a transistor and their relation, Advantages and disadvantages of C-E configuration.
	24-Feb-18		D.C. load line .Transistor biasing;
	25-Feb-18	Sunday	
9.	26-Feb-18	Historical introduction, Survey of superconductivity	
	27-Feb-18	Super conducting systems	
	28-Feb-18	Holiday	
	1-Mar-18	Holiday	
	2-Mar-18	Holiday(HOLI)	
	3-Mar-18	Holiday	
	4-Mar-18	Sunday	
10.	5-Mar-18	High Tc Super conductors, Isotopic Effect	
	6-Mar-18	Critical Magnetic Field, Meissner Effect ,London	

		Theory and Pippards' equation	
	7-Mar-18	Classification of Superconductors (type I and Type II), BCS Theory of Superconductivity	
	8-Mar-18		Assignment on configurations of transistor and D.C Load line
	9-Mar-18		various methods of transistor biasing and stabilization.
	10-Mar-18		Problem discussion on unit 2
	11-Mar-18	Sunday	
11.	12-Mar-18	Flux quantization, Josephson Effect (AC and DC)	
	13-Mar-18	Practical Applications of superconductivity and their limitations	
	14-Mar-18	Power application of superconductors	
	15-Mar-18		Unit 2-Test
	16-Mar-18		Amplifiers, Classification of amplifiers,
	17-Mar-18		common base and common emitter amplifiers,
	18-Mar-18	Sunday	
12.	19-Mar-18	Unit test-3	
	20-Mar-18	Definition and length scale, Introduction to nano-scale and technology	
	21-Mar-18	History of Nanotechnology, Benefits and challenges in molecular manufacturing	
	22-Mar-18		coupling of amplifiers, various methods of coupling
	23-Mar-18	Shaheedi Diwas	
	24-Mar-18		Resistance- Capacitance (RC) coupled amplifier (two stage, concept of band width, no derivation
	25-Mar-18	Sunday	
13.	26-Mar-18	Molecular assembler concept, Understanding advanced capabilities	
	27-Mar-18	Vision and objective of Nano-technology	
	28-Mar-18	Nanotechnology in different field, Automobile, Electronics	
	29-Mar-18	Mahavir Jayanti	
	30-Mar-18		Feedback in amplifiers
	31-Mar-18		Advantages and disadvantages of negative feedback,
	1-Apr-18	Sunday	
14.	2-Apr-18	Nanotechnology in different field, Automobile, Electronics	
	3-Apr-18	Nano-biotechnology, Materials, Medicine	
	4-Apr-18	Nano-biotechnology, Materials, Medicine	
	5-Apr-18		emitter follower, distortion in amplifiers
	6-Apr-18		Problem discussion of unit 3
	7-Apr-18		Unit 3 -test
	8-Apr-18	Sunday	
15.	9-Apr-18	Group discussion on nano	
	10-Apr-18	Vision and objective of Nano-technology	

	11-Apr-18	Unit test-4	
	12-Apr-18		Discussion on basic terms used in unit
	13-Apr-18		Oscillators, Principle of oscillation,
	14-Apr-18	Dr. Ambedkar Jayanti / Vaisakhi	
	15-Apr-18	Sunday	
16.	16-Apr-18	Revision of unit-1	
	17-Apr-18	Oral test of unit-1	
	18-Apr-18	Parashurama Jayanti	
	19-Apr-18		classification of oscillators, Condition for self sustained oscillation: Barkhausen criterion for oscillation,
	20-Apr-18		classification of oscillators, Condition for self sustained oscillation: Barkhausen criterion for oscillation
	21-Apr-18		Tuned collector common emitter oscillator
	22-Apr-18	Sunday	
17.	23-Apr-18	Revision of unit-2	
	24-Apr-18	Revision of unit-3	
	25-Apr-18	Revision of unit-4	
	26-Apr-18		Hartley oscillator
	27-Apr-18		C.R.O. (Principle and Working).
	28-Apr-18		Problem discussion of unit4
	29-Apr-18	Sunday	