

# GATEWAY INSTITUTE OF ENGINEERING AND TECHNOLOGY, SONIPAT

## LESSON PLAN

**Name of Faculty:** Dr. S. K. Jha

**Discipline:-** CSE,ME,ECE and CE

**Semester:** 2nd

**Subjects:** Engineering Physics-II( PHY102B & PHY104B)

**Lesson Plan Duration:** 15 Weeks (from January,2018 to April,2018)

**Workload(Lecture/Practical) per week (in hours) :** Lecture-03 ,Practicals -02 hours

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1st	1st	Introduction, Displacement Current & Equation of Continuity	1st	To study I-V characteristics and rectification properties of a semi conductor diode
	2nd	Gauss's Law in Dielectric, Application of Gauss's Law		
	3rd	Maxwell's Field Equations (both differential & Integral Form)		
2nd	4th	Plane e.m. Wave Equation in Free Space, Dielectric and Conducting Medium	2nd	To study the variation of magnetic field along the axis of circular coil carrying current and to estimate the radius of coil
	5th	Poynting Vector		
	6th	Test		
3rd	7th	Difficulties with Classical Physics, Introduction to Quantum Mechanics	3rd	Test
	8th	Black Body Radiation, Planks Law's of Radiation with its limitations		
	9th	Group Velocity & Phase Velocity		
4th	10th	Schrodinger Wave Equations	4th	To measure the high resistance by substitution method
	11th	Solutions of Schrodinger Wave Equation		
	12th	Test		
5th	13th	Space Lattice, Unit Cell & Translation Vectors	5th	Find the low resistance by carey foster bridge
	14th	Bravis Lattice Structure in 3D		
	15th	Simple Crystal Structure of NaCl, ZnS & CsCl <sub>2</sub>		
6th	16th	Elementary Idea of reciprocal Lattice & Ewald Construction	6th	Test
	17th	Experimental X-ray diffraction Method, Laue and Powder Method		
	18th	Test		
7th	19th	Elements of Classical Free Electron Theory	7th	To find ionisation potential of mercury /argon using thyratron valve
	20th	Drude Theory of Conduction & its limitations		
	21st	Quantum Theory of Free Electrons		
8th	22nd	Fermi Level & Fermi Dirac Distribution Function.	8th	To find the value of Planck's constant
	23rd	Density of States		
	24th	Thermionic Emission		
9th	25th	Richardson Equation	9th	Test
	26th	Test		
	27th	Origin of Energy Bands & K. P Model		
10th	28th	E-K Diagrams & Brillouin Zones	10th	To determine the resistance of semi conductor by using four probe method
	29th	Concepts of Effective Mass & Holes		
	30th	Classification of Solids into Metal, Semiconductor & Insulator		
11th	31st	Fermi Energy and its Variation with Temperature	11th	I-V characteristics of solar cell under constant illumination and finds its fill factor
	32nd	Conduction in Intrinsic & Extrinsic Semiconductors		
	33rd	Hall Effect & its Applications		
12th	34th	Test	12th	Test
	35th	Introduction to superconductivity, Critical Temperature & Meissner Effect		
	36th	Types of Superconductors		
13th	37th	London Equations, London Penetration Depth & Coherence Length	13th	To find e/m by helical method
	38th	BCS Theory (Qualitative ideas), High Temperature Superconductors		
	39th	Test		
14th	40th	Concept of Nano Materials & Size Dependence of Band Gap	14th	Lgic gates
	41st	Top-Down & Bottom-up Approach for preparing Nano Materials		
	42nd	MEMS & NEMS, Properties and applications of Fullerene		
15th	43rd	Graphene & CNT	15th	TEST
	44th	Nanowires, Nanocomposites & Quantum Dots		
	45th	Test		

# GATEWAY INSTITUTE OF ENGINEERING AND TECHNOLOGY, SONIPAT

## LESSON PLAN

**Name of Faculty:** Dr. Sanjay Goel

**Discipline:-** CSE,ME,ECE and CE

**Semester:** 2nd

**Subjects:** Engineering Mathematics-II( Math102B)

**Lesson Plan Duration:** 15 Weeks (from January,2018 to April,2018)

**Workload(Lecture/Practical) per week (in hours) :** Lecture-03

Week	Theory	
	Lecture Day	Topic (including assignment/test)
1st	1st	Introduction to exact differential equations.
	2nd	Problems related to exact differential equations.
	3rd	Equations reducible to exact differential equations.
2nd	4th	I.F to make equation exact for H.M equation & standard result of I.F
	5th	Applications of Differential equations of first order & first degree to simple electric
	6th	Applications of Differential equations of first order & first degree to Newton's law of
3rd	7th	Applications of Differential equations of first order & first degree to heat flow.
	8th	Applications of Differential equations of first order & first degree to orthogonal
	9th	Introduction to linear differential equation & complete solution
4th	10th	complementary function of L.D.E
	11th	particular integral of L.D.E for exponential & trigonometry function,
	12th	method of variation of parameters to find particular Integral,
5th	13th	Cauchy's and Legender's linear equations,
	14th	simultaneous linear equations with constant co-efficients.
	15th	<b>TEST</b>
6th	16th	Introduction to Laplace transforms of elementary functions.
	17th	properties of Laplace transforms, existence conditions
	18th	Transforms of derivaties, transforms of integrals,multiplication by tn, division by t..
7th	19th	Evaluation of integrals by Laplace transforms.
	20th	Laplace transform of Unit step function, unit impulse function and periodic function.
	21st	Inverse transforms, convolution theorem
8th	22nd	Application to linear differential equations and simultaneous linear differential equations
	23rd	<b>TEST</b>
	24th	Introduction to Functions of Complex variable
9th	25th	Exponential function, Trigonometric and Hyperbolic functions
	26th	Logarithmic functions. Limit and Continuity of a function,
	27th	Differnetiability and Analyticity.Cauchy-Riemann equations,
10th	28th	Necessary and sufficient conditions for a function to be analytic, polar form of the
	29th	Harmonic functions
	30th	application to flow problems.
11th	31st	Integration of complex functions.
	32nd	Cauchy-Integral theorem and formula.
	33rd	Power series, radius and circle of convergence,
12th	34th	Taylor's Maclaurin's and Laurent's series.
	35th	Zeroes and singularities of complex functions, Residues
	36th	<b>TEST</b>
13th	37th	Introduction to Fourier Series Fourier Transforms
	38th	Euler's formulae, conditions for a Fourier expansion
	39th	change of interval, Fourier expansion of odd and even functions, Fourier expansion of
14th	40th	rectangular wave,saw-toothed wave, half and full rectified wave
	41st	half range sine and consine series. Fourier integrals, Fourier transforms
	42nd	Shifting theorem (both on time and frequency axes), Fourier transforms of derivatives
15th	43rd	Convolution theorem.
	44th	Fourier Transform of Dirac Delta Function
	45th	<b>TEST</b>

## GATEWAY INSTITUTE OF ENGINEERING AND TECHNOLOGY, SONIPAT

### LESSON PLAN

**Name of Faculty:** Ms. Sonika

**Discipline:-** CSE

**Semester:** 2nd

**Subjects:** Engineering Chemistry( CH101B & CH103B)

**Lesson Plan Duration:** 15 Weeks (from January,2018 to April,2018)

**Workload(Lecture/Practical) per week (in hours) :** Lecture-03 ,Practicals -02 hours

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1st	1st	Second law, concept of entropy	1st	Determination of Ca <sup>++</sup> and Mg <sup>++</sup> hardness of water sample using EDTA solution.
	2nd	entropy change for ideal gas, free		
	3rd	free energy change ,chemical		
2nd	4th	Clausius –Clapeyron equation.	2nd	Determination of alkalinity of water sample
	5th	Related numerical problems with		
	6th	test		
3rd	7th	Terminology, Derivation of	3rd	Test
	8th	Two components systems,		
	9th	system with congruent melting		
4th	10th	system with incongruent melting	4th	Determination of viscosity of lubricant by red wood viscometer(No. 1 & No. 2).
	11th	Elementary idea of Zone refining		
	12th	test		
5th	13th	Hardness of water and its	5th	To determine Flash point & Fire point of an oil by Pensky-Marten's flash point apparatus
	14th	units of hardness, alkalinity of		
	15th	related numerical problems		
6th	16th	mixed bed demineralisation,	6th	Test
	17th	test		
	18th	Galvanic & concentration cell,		
7th	19th	Electrochemical theory of	7th	To prepare Phenol-formaldehyde and urea-formaldehyde resin.
	20th	Galvanic corrosion, Pitting		
	21st	water line corrosion, stress		
8th	22nd	Preventing measures, electroless	8th	To find out saponification No. of an oil
	23rd	test		
	24th	Organic polymers,		
9th	25th	effect of structure on properties	9th	Test
	26th	technical applications of		
	27th	thermosets (PF, UF & MF)		
10th	28th	elastomers (Synthetic Rubber	10th	Determination of concentration of KMnO <sub>4</sub> solution spectrophotometrically
	29th	Inorganic polymers (general		
	30th	test		
11th	31st	optical fibres, Fullerenes ,organic	11th	Determination of strength of HCl solution by titrating it against NaOH solution conductometrically
	32nd	their classification, constituents		
	33rd	advantage and applications of		
12th	34th	test	12th	Test
	35th	Friction, mechanism of		
	36th	classification and properties of		
13th	37th	selection of Lubricants,	13th	To determine amount of sodium and potassium in a given water sample by flame photometer
	38th	Calorific value and methods of		
	39th	test		
14th	40th	Thermal methods; Principle,	14th	Determination of dissolved oxygen (DO) in the given water sample
	41st	interaction of E.M radiation with		
	42nd	Vibrational & electronic spectra		
15th	43rd	spectrophotometry	15th	TEST
	44th	conductometric titrations,		
	45th	test		

# ATEWAY INSTITUTE OF ENGINEERING AND TECHNOLOGY, SONIP/

## LESSON PLAN

Name of the Faculty : Mr. Lalit Kumar

Discipline:- B. Tech. (ME)

Semester: 2nd

Subject : MANUFACTURING PROCESSES (ME 101B)

Lesson Plan Duration: 15 Weeks (from January,2018 to April,2018)

Work Load (Lectures) per week in hours: Lectures – 03, Tutorial – 01

Week	Theory	
	Lecture Day	Topic (including assignment/test)
1st	1st	Introduction to Manufacturing Processes and their Classification
	2nd	automation in manufacturing, Industrial Safety: Introduction,
	3rd	Types of Accidents, Causes and Common
2nd	4th	Sources of Accidents, Methods of Safety,
	5th	Electric Safety Measures, First Aid.
	6th	Plant Layout,
3rd	7th	Principles of Plant Layout, Objectives of Layout,
	8th	Types of Plant and shop layouts and their Advantages
	9th	General Properties and Applications of Engineering Materials,
4th	10th	Mild Steel, Medium Carbon Steel, High Carbon Steel,
	11th	High Speed Steel and Cast Iron, Non-Ferrous Materials, Shop's Tools Materials,
	12th	Super Alloys or High Temperature Materials
5th	13th	Introduction to Casting Processes, Basic Steps in Casting Process
	14th	Pattern, Types of Patterns, Pattern allowances, Risers, Runners, Gates,
	15th	Molding Sand and its composition, Sand Preparation,
6th	16th	Core Assembly, Mold Assembly,
	17th	Molding Methods, Core Sands and Core Making
	18th	Melting ( Cupola) and Pouring, Fettling, Casting
7th	19th	Defects and Remedies. Testing of Castings
	20th	<b>COLD WORKING (SHEET METAL WORK):</b> Sheet Metal Operations, Measuring
	21st	Layout Marking, Shearing,
8th	22nd	Punching, Blanking
	23rd	Piercing, Forming
	24th	Bending Joining - Advantages and Limitations
9th	25th	Hot Working. Processes,
	26th	Introduction to Hot Working Principles of Hot Working Processes,
	27th	Forging, Rolling, Extrusion, Wire Drawing
10th	28th	INTRODUCTION TO MACHINE TOOLS
	29th	Lathe
	30th	M/C Shaper, Planer
11th	31st	Milling, Drilling, Slotter,
	32nd	Introduction to Metal Cutting. Nomenclature of a Single Points Cutting Tool and
	33rd	Mechanics of Chips Formation
12th	34th	Type of Chips, Use of Coolants in machining.
	35th	<b>WELDING:</b> Introduction to Welding,
	36th	Classification of Welding Processes,
13th	37th	Test
	38th	Gas Welding: Oxy-Acetylene Welding,
	39th	Arc Welding: Metal Arc,
14th	40th	TIG & MIG Welding,
	41st	Welding Defects and Remedies, Soldering & Brazing,
	42nd	Comparisons among Welding, Brazing and Soldering
15th	43rd	Surface Finishing Processes,
	44th	Introduction to Heat Treatment Processes,
	45th	Estimating of Manufacturing Cost

**Reference Book:-** Workshop Technology by S.K.Garg

## LESSON PLAN

Name of faculty: Mr. Vikram Kapoor

Discipline:- Mechanical

Semester:2nd

Subject: EGD(ME103B)

Lesson Plan Duration:15 Weeks (from January,2018 to April,2018)

Work Load (Lecture/Practical) per week (in hours):- Practicals-04

Week	Practical	
	Practical Days	Topic
1 <sup>st</sup>	1 <sup>st</sup>	To prepare the sheet of Lettering.
2 <sup>nd</sup>	2 <sup>nd</sup>	To prepare the sheet of Types of Lines.
3 <sup>rd</sup>	3 <sup>rd</sup>	To prepare the sheet of Projection of Points in different Quadrants.
4 <sup>th</sup>	4 <sup>th</sup>	To prepare the sheet of projection of straight line.
5 <sup>th</sup>	5 <sup>th</sup>	To prepare the sheet of projection of plane.
6 <sup>th</sup>	6 <sup>th</sup>	To prepare the sheet of projection of solid.
7 <sup>th</sup>	7 <sup>th</sup>	To prepare the sheet of Orthographic Views.
8 <sup>th</sup>	8 <sup>th</sup>	To prepare the sheet of Isometric projection.
9 <sup>th</sup>	9 <sup>th</sup>	To prepare the sheet of First and Third Angle systems of Orthographic Projections
10 <sup>th</sup>	10 <sup>th</sup>	To prepare the sheet of Orthographic Drawings - Screw Threads, Bolts, Nuts.
11 <sup>th</sup>	11 <sup>th</sup>	To prepare the sheet of Development of Surfaces of various Solids objects
12 <sup>th</sup>	12 <sup>th</sup>	To prepare the sheet of Projections of sections of Prisms.
13 <sup>th</sup>	13 <sup>th</sup>	To prepare the sheet of Orthographic Views from Isometric.
14 <sup>th</sup>	14 <sup>th</sup>	To prepare the sheet of Projections of sections of Cones.
15 <sup>th</sup>	15 <sup>th</sup>	Test

**Reference Book:-** Engineering Drawing P.S. Gill

# GATEWAY INSTITUTE OF ENGINEERING AND TECHNOLOGY, SONIPAT

## LESSON PLAN

Name of Faculty: Dr.Sunil Nijhawan

Discipline:- ME,ECE and CE

Semester: 2nd

Lesson Plan Duration: 15 Weeks (from January,2018 to April,2018)

Workload(Lecture/Practical) per week (in hours) : Lecture-03 ,Practicals -02 hours

Week	Theory		Practical	
	Lecture I	Topic (including assignment/test)	Practical Day	Topic
1st	1st	Basic concepts of electric circuits,	1st	To verify KCL
	2nd	Ohm's Law, Independent energy		
	3rd	Dependent energy sources, passive		
2nd	4th	Circuit properties, Kirchoff's laws,	2nd	To verify KVL
	5th	Nodal methods of Analysis		
	6th	Loop methods of Analysis		
3rd	7th	Superposition Theorem,	3rd	To verify Thevenin's Theorems.
	8th	Thevenin's Theorem		
	9th	Norton's Theorem		
4th	10th	Reciprocity Theorem	4th	To verify Norton's Theorems.
	11th	Maximum Power Transfer Theorem		
	12th	Millman's Theorem		
5th	13th	Star-Delta or delta-star transformation	5th	To verify maximum power transfer theorem in D.C. Circuit.
	14th	Applications of network theorems P-		
	15th	Sinusoidal signal, Phasors, polar		
6th	16th	Rectangular, exponential &	6th	To verify reciprocity theorem.
	17th	Resistance, Inductance & Capacitance		
	18th	Phasor relationship for circuit		
7th	19th	Average and RMS values, active	7th	To verify Superposition theorem.
	20th	Complex power, behavior of AC series		
	21st	Resonance-series and parallel R-L-C		
8th	22nd	Q-factor, cut-off frequencies &	8th	To study frequency response of a series R-L-C circuit and determine resonant frequency & Q- factor for various Values of R, L, C.
	23rd	Phase and line voltages and currents		
	24th	balanced star and delta circuits,		
9th	25th	power equation, measurement of	9th	To study frequency response of a parallel R-L-C circuit and determine resonant frequency & Q -Factor for various values of R, L, C.
	26th	Principle, Construction & working of		
	27th	Principle, Construction & working of		
10th	28th	Principle, Construction & working of	10th	To perform direct load test of a transformer and plot efficiency Vs load characteristic.
	29th	Principle, Construction & working of		
	30th	Principle, Construction & working of		
11th	31st	Ampere's law, Mutual Inductance,	11th	To study various type of meters.
	32nd	Construction, Working principle of Sin		
	33rd	phasor diagrams of Single-phase Trans		
12th	34th	Emf equation,	12th	Measurement of power by three voltmeters / three ammeters method.
	35th	Equivalent circuit, testing, efficiency ar		
	36th	Auto transformer.		
13th	37th	Construction and working principle of c	13th	Measurement of power in a three phase system by two watt meter method.
	38th	Construction and working principle of dc an		
	39th	Construction and working principle of		
14th	40th	3-phase synchronous machines,	14th	test
	41st	torque-speed characteristic		
	42nd	Ampere's law, Mutual Inductance,		
15th	43rd	Construction, Working principle of Sin	15th	Revision
	44th	phasor diagrams of Single-phase Trans		
	45th	Emf equation,		

# GATEWAY INSTITUTE OF ENGINEERING AND TECHNOLOGY, SONIPAT

## LESSON PLAN

**Name of Faculty:** Ms. Rachna

**Discipline:-** B. Tech. (CSE)

**Semester:** 2nd

**Subjects:** INTRODUCTION TO COMPUTERS AND PROGRAMMING(CSE 101B)

**Lesson Plan Duration:** 15 Weeks (from January,2018 to April,2018)

**Workload(Lecture/Practical) per week (in hours) :** Lecture-04, Practicals -02 hours

Week	Theory		Practical	
	Lecture Da	Topic (including assignment/test)	Practical D	Topic
1st	1st	Anatomy of a digital Computer	1st	Write a program to find the largest of three numbers. (if-then-else)
	2nd	Different Units of Computer System		
	3rd	Classification of Computer Systems		
2nd	4th	Radix Number systems. Binary codes	2nd	Write a program to find the largest number out of ten numbers (for-statement)
	5th	EBCDIC, ASCII		
	6th	Test		
3rd	7th	Operating System Concepts	3rd	Write a program using arrays to find the largest and second largest no. out of given 50 nos.
	8th	Operating System services		
	9th	Types of Operating Systems.		
4th	10th	Unix/Linux, DOS, Windows.	4th	Write a program to find the average male height & average female heights in the class (input is in form of sex code, height).
	11th	Language		
	12th	Test		
5th	13th	Assembler, Linker, Loader,	5th	Write a program to find roots of quadratic equation using functions and switch statements
	14th	Compiler, Interpreter, debuggers		
	15th	definition		
6th	16th	algorithms, flowcharts and their	6th	File check & Viva
	17th	Test		
	18th	of Computer Networks		
7th	19th	Working of Internet and its Major	7th	Write a program to multiply two matrices
	20th	Network Topologies: Bus, Star,		
	21st	Types of Networks: LAN, MAN and		
8th	22nd	Electronic Mail: advantages and	8th	Write a program to sort numbers using the Quicksort Algorithm.
	23rd	e-mail addresses, message		
	24th	message composition, mailer features		
9th	25th	E-mail inner workings, E-mail	9th	Test
	26th	chat rooms.		
	27th	Bean Writing Process		
10th	28th	Test	10th	Write programs in Java to create and manipulate Text Area, Canvas, Scroll Bars, Frames, and menus using swing/AWT.
	29th	C Fundamentals, Basic data types		
	30th	local and external variables and		
11th	31st	formatted input/ output, expressions	11th	Write a program to check that the input string is a palindrome or not.
	32nd	selection statements, loops and their		
	33rd	arrays, functions, recursive functions		
12th	34th	Test	12th	Write a program which manipulates structures
	35th	pointers and arrays. Strings literals		
	36th	arrays of strings; applications		
13th	37th	Structures, Unions and Enumerations	13th	Write a program to read a string and write it in reverse order.
	38th	Test		
	39th	preprocessor directives, macro		
14th	40th	conditional compilation, storage	14th	Write a program to concatenate two strings.
	41st	type's qualifiers, Low level		
	42nd	error handling		
15th	43rd	file operations (low level/high level)	15th	File check & Viva
	44th	Test		

# GATEWAY INSTITUTE OF ENGINEERING AND TECHNOLOGY, SONIPAT

## LESSON PLAN

**Name of Faculty:** Mr. Vivek Garg

**Discipline:-** B. Tech. (ME)

**Semester:** 2nd

**Subjects:** Elements of Mechanical Engineering (ME 105 B)

**Lesson Plan Duration:** 15 Weeks (from January,2018 to April,2018)

**Workload(Lecture/Practical) per week (in hours) :** Lecture-04, Practicals -02 hours

Week	Theory		Practical Day	Practical Topic
	Lecture Day	Topic (including assignment/test)		
1st	1st	THERMODYNAMICS:- definitions	1st	To study Cochran and babcock and Wilcox boiler.
	2nd	concept of internal energy, enthalpy		
	3rd	numerical problems.		
2nd	4th	Assignment:- Classification of	2nd	To study Boiler mountings and accessories .
	5th	PROPERTIES OF STEAM &		
	6th	Carnot and Rankin cycle		
3rd	7th	Assignment:- Cochran and Babcock	3rd	To study the working of 2 stroke and 4 stroke petrol engine.
	8th	I.C. ENGINES AND GAS		
	9th	Derivation of Diesel cycle		
4th	10th	Numerical on otto and diesel cycle	4th	To study the working of 2 stroke and 4 stroke diesel engine.
	11th	Numerical on otto and diesel cycle		
	12th	Assignment:- Constructional details		
5th	13th	gas turbine and numerals	5th	To find MA/VR/efficiency of screw jack.
	14th	REFRIGERATION AND AIR		
	15th	simple vapor compression cycle		
6th	16th	fundamentals of air conditioning,	6th	To find MA/VR/efficiency of single purchase and double purchase winch crab.
	17th	SIMPLE LIFTING MACHINES:-		
	18th	Laws of machines, Reversibility of		
7th	19th	Assignment:- Construction details	7th	To find MA/VR/efficiency of worm and worm wheel
	20th	Wheel and axle, Differential pulley		
	21st	Single, double and triple start worm		
8th	22nd	Single and double purchase winch	8th	To study different types of turbines.
	23rd	Simple and compound screw jacks		
	24th	Numericals on basic lifting machines		
9th	25th	Test on steam and its properties	9th	
	26th	Numerical on single and double		
	27th	Numerical on screw jack		
10th	28th	Numerical on worm wheel.	10th	
	29th	Pumps and its classification		
	30th	Test on lifting machines.		
11th	31st	POWER TRANSMISSION AND	11th	
	32nd	Numerical on belt drive		
	33rd	derivation of rope drive		
12th	34th	Numerical on rope drive	12th	
	35th	derivation of chain drive		
	36th	Numerical on chain drive		
13th	37th	Gear train	13th	
	38th	Numerical on gear train		
	39th	Test on brakes and gear train.		
14th	40th	STRESSES AND STRAINS:- basic	14th	
	41st	Stress-strain diagrams,Elastic		
	42nd	Elastic constants & their		
15th	43rd	Numerical on simple and compound	15th	
	44th	Concept of shear force and bending		
	45th	numerical problems on different		

# GATEWAY INSTITUTE OF ENGINEERING AND TECHNOLOGY, SONIPAT

## LESSON PLAN

**Name of Faculty:** Ms.Manisha Sharma

**Discipline:-** CSE,ME,ECE and CE

**Semester:** 2nd

**Subjects:** Basics of Electronics Engineering (ECE-102-B)

**Lesson Plan Duration:** 15 Weeks (from January,2018 to April,2018)

**Workload(Lecture/Practical) per week (in hours) :** Lecture-03

Week	Theory	
	Lecture Day	Topic (including assignment/test)
1st	1st	Basic concepts, intrinsic and extrinsic semiconductors, diffusion and drift currents
	2nd	Hall effect and its applications-pn junction under open circuit
	3rd	Reverse bias and forward bias conditions, p-n junction in the breakdown region
2nd	4th	Ideal diode, Types of diodes
	5th	Zener diode, Varactor diode, LED
	6th	Photodiode
3rd	7th	Rectifier (half wave and full wave).
	8th	Test
	9th	Introduction of BJT
4th	10th	Different types of BJT amplifiers
	11th	BJT characteristics
	12th	Test
5th	13th	Introduction of OP-amps
	14th	OP-amps its characteristics
	15th	Inverting, non-inverting
6th	16th	Summing, averaging
	17th	Scaling, difference, Integrator
	18th	Differentiator amplifiers
7th	19th	Test
	20th	Power supplies
	21st	Introduction and working of switched mode power supply (SMPS)
8th	22nd	Voltage regulator
	23rd	Test
	24th	Introduction of number system
9th	25th	Binary, Octal and Hexadecimal number system and conversion
	26th	Boolean algebra
	27th	Truth tables of logic gates
10th	28th	AND, OR, NOT, EX-OR, EX-NOR, NAND, NOR
	29th	AND, OR, NOT, EX-OR, EX-NOR, NAND, NOR and their implementation using diodes transistors, switches and lamps, Universal gates
	30th	Test
11th	31st	meter (digital and analog)
12th	34th	Need of modulation Block diagram of basic communication system
	35th	Overview of AM and FM .
	36th	Overview of PM
13th	37th	Test
	38th	Basics of 8085 & its architecture
	39th	Instruction set,
14th	40th	Test
	41st	Interrupts
	42nd	Addressing modes
15th	43rd	Test
	44th	Revision of Back year question papers
	45th	Revision of Back year question papers