Course Schedule – November 2016 – April 2017

Department Name/s of the Faculty **PHYSICS**

Dr.R.Shanmugasundari

Course Title PHYSICS -II 15PH/AC/PH23 **Course Code**

Shift I

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Nov. 14 - 19, 2016 (Day Order 1 to 6)	Unit 1 Electricity 1.1 Quantisation of Charge – Conservation of Electric Charge – Coulomb's Law of Force between Charges – Flux of Electric Field - Gauss's Law – Statement and Proof	Lecture	Subrahmanyam, N. and Lal Brij. A Text Book of Electricity and Magnetism	Problem solving
Nov. 21 - 28, 2016 (Day Order 1 to 6)	Electric Field of a Point Charge Using Gauss Law – Electric Potential – Relation between Potential and Field Strength - 1.2 Capacitance			Review - Questioning
Nov. 29 – Dec 5, 2016 (Day Order 1 to 6)	Capacitance of Parallel Plate Capacitor with and without Dielectric Unit 2 Magnetism 2.1 Magnetic Field: Definition of B – Force on a Charge in a Magnetic Field, in an Electromagnetic Field (Lorentz Force)	Lecture	Halliday David, Resnik Robert and Walker Jearl, Fundamentals of Physics	Quiz
Dec 6 - 14, 2016 (Day Order 1 to 6)	Maxwell's Electromagnetic Equations (No Derivations) – Physical Significance of the Equations 2.2 Electromagnetism: Force on a Current Carrying Conductor in a Magnetic field	Lecture	Subrahmanyam, N. and Lal Brij. A Text Book of Electricity and Magnetism	Problem solving
Dec. 15 – 21, 2016 (Day Order 1 to 6)	Moving Coil Ballistic Galvanometer – Theory, Current and Charge Sensitivity of B.G – Relation Between the Two			III Comp Problem test
Jan. 03- 09, 2017 (Day Order 1 to 6)	Unit 3 Geometrical Optics 3.1 Defects of Images- Monochromatic Aberrations – Spherical Aberrations in Lenses – Methods of Minimizing Spherical Aberration- Chromatic Aberration – Achromatic Combination of Lenses in Contact and Lenses Separated by a Distance	Presentation using PPT	Subramaniam N. and Brijlal. Optics	Problem solving
Jan. 10- 17, 2017 (Day Order 1 to 6)	3.2 Optical Instruments: Telescopes – Angular Magnification of Telescopes – Refractive Astronomical Telescope – Terrestrial		Kakani, S L, and Bhandari K C. A Text Book of Optics	III Comp Presentation

	Telescope –			
10.20.2015				
Jan. 18- 20, 2017	Reflecting Telescopes – Radio			
(Day 1 to 3)	Telescope – Hubble Telescope -			
	Revision			
1 22 20 2017	Tte vision	G A TE 4		
Jan.23 - 28, 2017		C.A. Tests		
Jan.30 – Feb 01,	Unit 4 Physical Optics	Lecture	Subramaniam	Review -
2017	4.1 Interference: Newton's Rings –		N. and Brijlal.	Questioning
(Day Order 4 to 6)	Measurement of Wavelength			
			Optics	
Feb.02 - 09, 2017	Diffraction Introduction –			Problem
(Day Order 1 to 6)	Fraunhofer Diffraction –			solving
	Transmission Grating – Normal			
	Incidence – Determination of			
	Wavelength - Polarisation – Double Refraction			
Feb.10 - 17, 2017	Nicol Prism – Optical Activity –	Lecture	Subramaniam	Problem
(Day Order 1 to 6)	Determination of Specific	Lecture		solving
(= 11)	Rotatory Power Using Laurent's		N. and Brijlal.	
	Half Shade Polarimeter – Uses of		Optics	
	Polaroids			
Feb.20 - 27, 2017	Unit 5 Electronics	Lecture	Mehta, V.K.	Review -
(Day Order 1 to 6)	5.1 Introduction to Amplifiers -		Principles of	Questioning
	Operational Amplifier – Ideal Op-		Electronics.	
Feb.28 – Mar 07,	Amp -CMRR Inverting and Non- Inverting Op-		Mehta, V.K.	III Comp
(Day Order 1 to 6)	Amp Summing, Difference, Integral		Principles of	_
(Buy Graci i to 0)	and Differential Op- Amp		Electronics.	Problem test
	The state of the s			
Mar. 06 - 16, 2017	C.A. IMP	ROVEMENT T	TESTS	-
Mar. 08 - 15, 2017	5.2 BooleanAlgebra-		Mehta, V.K.	Problem
(Day Order 1 to 6)	DeMorgan's Theorem – Verification-		Principles of	
	Algebraic Simplification –		Electronics.	solving
	Implementation of Boolean Algebra			
	into Circuits			
Mar. 16, 2017(Day	Problem solving in Unit 5			
Order 1)				
Mar. 17 - 23, 2017				
(Day Order 2 to 6) March 24, 2017	-	REVISION		
(DayOrder1)				
(DayOlucii)				

Course Schedule – November 2016 – April 2017

Department : PHYSICS

Name/s of the Faculty : Dr.R.Shanmugasundari Course Title : ENERGY PHYSICS Course Code : 15PH/GE/EP23

Smit	; 1	T	1	
Week & No. of	Units & Topics	Teaching	Text &	Method of
hours		Methodology	References	Evaluation
N 14 10 2016	TT 1/4 T / I /	T .	V 1 C	
Nov. 14 - 19, 2016	Unit 1 Introduction	Lecture	Vandana. S.	
(Day Order 1 to 6)	1.1 Energy: Sources of Energy - Forms		Alternative	
	of Energy- Potential, Kinetic,		Energy.	
	Mechanical, Chemical and Thermal			
	Units of Energy.			
Nov. 21 - 28, 2016	Uses of Energy, Energy Conversion			Review -
(Day Order 1 to 6)	1.2 Non-Renewable Energy – Coal,			Questioning
	Petroleum, Gas			
Nov. 29 Dec 5,	Renewable Energy- Solar, Wind,	Lecture	Tiwari. G. N. and	Quiz
2016	Biomass, Geothermal and Nuclear,		Ghosal M. K.	
(Day Order 1 to 6)	Advantages and Disadvantages		Renewable Energy	
			resources	
Dec 6 - 14, 2016	Unit 2 Non-Renewable Energy	Lecture		
(Day Order 1 to 6)	2.1 Coal - Early Uses as Fuel,-			
, •	Electricity Generation, Petroleum-			
	Composition, Reservoirs – Uses			
Dec. 15 – 21, 2016	2.2 Natural Gas – Process, Conversion			Review -
(Day Order 1 to 6)	to Electrical Energy			Questioning
Jan. 03- 09, 2017	Unit 3 Renewable Energy	Presentation	Ashok V. Desai.	
(Day Order 1 to 6)	3.1 Solar Energy- Solar Energy	using PPT	Non-conventional	
•	Conversion, Solar Pond, Solar Voltaic		Energy	
	Cell Conversion			
Jan. 10- 17, 2017	Wind Energy, Wind Mill Types,		Tiwari. G. N. and	III Comp
(Day Order 1 to 6)	Geothermal- Power Plants, Uses of		Ghosal M. K.	Test
•	Geothermal Water		Renewable Energy	
			resources	
Jan. 18- 20, 2017	3.2 Biomass Energy – Biofuel			Review -
(Day 1 to 3)	Conversion Process, Gasification of Bio			Quiz
	Mass			
Jan.23 - 28, 2017		C.A. Tests		
Jan.30 – Feb	Nuclear: Nuclear Fission and Fusion,	Lecture		Review -
01,2017	Power Reactors	Lecture		Questioning
(Day Order 4 to 6)	1 5 51 Reductions			Zucomonnig
Feb.02 - 09, 2017	Hydroelectric Power, Principle -		Ashwin	
(Day Order 1 to 6)	Production of Power		Paramar.	
(24) 01401 1 10 0)	Unit 4 Energy and Environment		Energy Future	
	4.1 Energy and Environment,		Lineigy i didic	
	Conservation of Energy			

E 1 10 15 2015		-			
Feb.10 - 17, 2017	Energy Consumption, Calorific Values	Lecture			
(Day Order 1 to 6)	of Energy				
Feb.20 - 27, 2017	Unit 5 Energy Audit and Planning	Lecture	Ashwin	Case study	
(Day Order 1 to 6)	5.1 Sustainable Energy Development,		Paramar.	analysis	
	Present and Future, Need of Alternate		Energy Future		
	Source of Energy.				
Feb.28 – Mar 07,	III Comp Presentation			III Comp.	
(Day Order 1 to 6)				Presentation	
Mar. 06 - 16, 2017	C.A. IMPROVEMENT TESTS				
Mar. 08 - 15, 2017	5.2 Energy Audit	Demo and Case			
(Day Order 1 to 6)		study			
		presentation			
Mar. 16, 2017(Day	Case study analysis				
Order 1)					
Mar. 17 - 23, 2017				·	
(Day Order 2 to 6)	REVISION				
March 24, 2017					
(Day Order 1)					

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty : Ms. D. Anceila

Course Title : Physics - II

Course Code : 15PH/AC/PH23

Week & No. of hours	Units & Topics	Teaching	Text &	Method of
		Methodology	References	Evaluation
Nov. 14 - 19, 2016	Unit 1	Lecture	Text Book of	
(Day Order 1 to 6)	Electricity		Electricity and	
(Buy Graci i to o)	1.1.Quantisation of		Magnetism	
	Charge –		Subrahmanyam,	
	Conservation of		N. and Lal Brij.	
	Electric Charge –		A	
	Coulomb's Law of			
	Force between			
	Charges – Flux of			
	Electric Field –			
	Gauss's Law –			
	Statement and Proof			
Nov. 21 - 28, 2016	1.1.Electric Field of a	Lecture	Text Book of	Questioning on
· ·	Point Charge Using		Electricity and	the classes taught
(Day Order 1 to 6)	Gauss Law – Electric		Magnetism	
	Potential – Relation		Subrahmanyam,	
	between Potential and		N. and Lal Brij.	
	Field Strength		A	
Nov. 29 – Dec 5,	1.2. Capacitance-	Lecture and	Text Book of	
,	Capacitance of	problem solving	Electricity and	
2016	Parallel Plate	proorem sorting	Magnetism	
(Day Order 1 to 6)	Capacitor with and		Subrahmanyam,	
(Buy Graef Fite 6)	without Dielectric.		N. and Lal Brij.A	
Dec 6 - 14, 2016	Unit 2	Lecture	Text Book of	Questioning on
·	Magnetism	Lecture	Electricity and	the classes taught
(Day Order 1 to 6)	2.1.Magnetic Field:		Magnetism	the classes taught
	Definition of B –		Subrahmanyam,	
	Force on a Charge in		N. and Lal Brij.	
	a Magnetic Field, in		A Allu Lai Biij.	
			A	
	an Electromagnetic			
	Field (Lorentz Force)			
	Maxwell's			
	Electromagnetic			
	Equations (No			
	Derivations) –			
	Physical Significance			
	of the Equations			

Dec. 15 - 21, 2016	2.2.Electromagnetism:	Lecture and	Text Book of	
(Day Order 1 to 6)	Force on a Current	problem solving	Electricity and	
(Buy Grace 1 to 0)	Carrying Conductor		Magnetism	
	in a Magnetic field –		Subrahmanyam,	
	Moving Coil Ballistic		N. and Lal Brij.	
	Galvanometer –		A	
	Theory, Current and			
	Charge Sensitivity of			
	B.G – Relation			
Jan. 03- 09, 2017	Between the Two. Unit 3 Geometrical	Lecture	Ontics	O:- III
Jan. 03- 09, 2017		Lecture	Optics Subramaniam N.	Quiz – III
(Day Order 1 to 6)	Optics 3.1.Defects of		and Brijlal.	Component
	Images-		and Drijiai.	
	Monochromatic			
	Aberrations –			
	Spherical Aberrations			
	in Lenses – Methods			
	of Minimizing			
	Spherical Aberration-			
Jan. 10- 17, 2017	3.1.Chromatic	Lecture and	Optics	
	Aberration -	problem solving	Subramaniam N.	
(Day Order 1 to 6)	Achromatic		and Brijlal.	
	Combination of			
	Lenses in Contact and			
	Lenses Separated by a			
	Distance			
Jan. 18- 20, 2017	3.2. Optical	Lecture	Optics	
(Day Order 1 to 3)	Instruments:		Subramaniam N.	
(Day Order 1 to 3)	Telescopes – Angular		and Brijlal.	
	Magnification of			
	Telescopes –			
	Refractive			
	Astronomical			
	Telescope –			
Jan.23 - 28, 2017		C.A. T	ests	
Jan.30 – Feb 01, 2017	3.2. Terrestrial	Lecture	Optics	Group
(Day Order 4 to 6)	Telescope –		Subramaniam N.	presentation –
(24) 01401 1 10 0)	Reflecting Telescopes		and Brijlal.	III component
	– Radio Telescope –			
71.00.00	Hubble Telescope			
Feb.02 - 09, 2017	Unit 4 Physical	Lecture cum	Optics	
(Day Order 1 to 6)	Optics	demonstration	Subramaniam N.	
	4.1 Interference:		and Brijlal.	
	Newton's Rings –			
	Measurement of			
	Wavelength - Diffraction:			
	Introduction –			
	Fraunhofer			
	Diffraction –			
	Diffaction –	1		

Feb.10 - 17, 2017	Transmission Grating - Normal Incidence - Determination of Wavelength - 4.1. Polarisation -	Lecture cum	Optics	Questioning on
(Day Order 1 to 6)	Double Refraction- Nicol Prism – Optical Activity – Determination of Specific Rotatory Power Using Laurent's Half Shade Polarimeter – Uses of polaroids	demonstration	Subramaniam N. and Brijlal.	the classes taught
Feb.20 - 27, 2017 (Day Order 1 to 6)	Unit 5 Electronics 5.1. Introduction to Amplifiers - Operational Amplifier - Ideal Op- Amp - CMRR - Inverting and Non- Inverting Op- Amp -	Lecture cum demonstration	Principles of Electronics Mehta, V.K	Problem Test - III component
Feb.28 – Mar 07,	5.1. Summing,	Lecture	Principles of Electronics	
2017	Difference, Integral and		Mehta, V.K	
(Day Order 1 to 6)	Differential Op- Amp			
Mar. 06 - 16, 2017		C.A. IMPROVE	MENT TESTS	
Mar. 08 - 15, 2017	5.2. Boolean Algebra-	Lecture cum	Principles of	Questioning on
(Day Order 1 to 6)	De Morgan's Theorem - verification-Algebraic Simplification - Implementation of Boolean Algebra into Circuits	demonstration	Electronics Mehta, V.K	the classes taught
Mar. 16, 2017				
(Day Order 1)	REVISION			
Mar. 17 - 23, 2017				
(Day Order 2 to 6)				
March 24, 2017	1			
(Day Order 1)		REVIS	ION	

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty : Ms. N. Neeraja

Course Title : Environmental Studies

Course Code : 15PH/GC/ES 22

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Nov. 14 - 19, 2016 (Day Order 1 to 6)	Unit1 Natural Resources 1.1. Renewable & non renewable resources 1.2. Forest resources – use and over exploitation 1.3. Water resources – use and over utilization of surface & ground water	Lecture	Textbook of Environmental Studies- Arul. P.A	
Nov. 21 - 28, 2016 (Day Order 1 to 6)	1.4. Mineral resources – use and exploitation. 1.5. Food resources – world food problems – effects of modern agriculture – sustainable agriculture.	Lecture	Textbook of Environmental Studies- Arul. P.A	Questioning on the classes taught
Nov. 29 – Dec 5, 2016 (Day Order 1 to 6)	1.6. Energy resources – renewable and non renewable energy sources – use of alternative sources of energy. 1.7.Need for public awareness in conservation of natural resources.	Guest Lecture	Textbook of Environmental Studies- Arul. P.A	Group Discussion-III Component
Dec 6 - 14, 2016 (Day Order 1 to 6)	Unit 2 Ecosystems and Biodiversity 2.1. Characteristic features of terrestrial and aquatic ecosystems – structure, function, food chain, food web & ecological pyramids. 2.2.Ecological succession. (a brief study)	Lecture	Textbook of Environmental Studies- Bharucha, E.,	
Dec. 15 - 21, 2016 (Day Order 1 to 6)	2.3.Definition and levels of biodiversity 2.4.Hot spots of biodiversity		Textbook of Environmental Studies- Bharucha, E.,	

Jan. 03- 09, 2017 (Day Order 1 to 6) Jan. 10- 17, 2017 (Day Order 1 to 6)	2.5. Threats to biodiversity – habitat loss – poaching of wildlife – man & wildlife conflicts. 2.6.Conservation of biodiversity – <i>in-situ</i> and <i>ex-situ</i> conservation methods Unit 3 Environmental Pollution 3.1. Air Pollution : sources ,	Lecture	Textbook of Environmental Studies- Bharucha, E., Textbook of Environmental Studies-	Group presentation – III component
Jan. 18- 20, 2017 (Day Order 1 to 3)	effects and control 3.2. Water Pollution: sources, effects and control 3.3. Soil Pollution: sources, effects and control 3.4.Noise Pollution: sources, effects and control	Lecture	Bharucha, E., Textbook of Environmental Studies- Bharucha, E.,	Questioning on the classes taught
Jan.23 - 28, 2017		C.A. Tes		taugnt
Jan.30 – Feb 01, 2017 (Day Order 4 to 6)	3.5.Nuclear Hazards 3.6.Environmental Impact Assessment	Guest Lecture	Textbook of Environmental Studies- Bharucha, E.,	
Feb.02 - 09, 2017 (Day Order 1 to 6)	3.7. Role of individual, society and government in prevention of pollution.	Lecture	Textbook of Environmental Studies- Bharucha, E.,	Questioning on the classes taught
Feb.10 - 17, 2017 (Day Order 1 to 6)	Unit 4 Social Issues and the Environment 4.1. Multidisciplinary nature of environmental studies	Lecture	Textbook of Environmental Studies- Arul. P.A	
Feb.20 - 27, 2017 (Day Order 1 to 6)	4.2. Population explosion and its impact on environment 4.3. Water conservation – rain water harvesting – watershed management	Lecture	Textbook of Environmental Studies- Arul. P.A	Quiz- III Component
Feb.28 – Mar 07, 2017 (Day Order 1 to 6)	4.4. Environmental ethics 4.5. Climate change and global warming	Lecture	Textbook of Environmental Studies- Arul. P.A	

Mar. 06 - 16, 2017	C.A. IMPROVEMENT TESTS			
Mar. 08 - 15, 2017 (Day Order 1 to 6)	4.6. Role of information technology in environment	Lecture	Textbook of Environmental Studies- Arul. P.A	Questioning on the classes taught
Mar. 16, 2017 (Day Order 1)	Revision			
Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017		REVISI	ON	
March 24, 2017 (Day Order 1)				

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty : Ms. A. Suganthi Lark

Course Title : Basic Principles of Physics

Course Code : 15PH/GE/BP22

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Nov. 14 - 19, 2016 (Day Order 1 to 6)	Unit 1 Mechanics 1.1 Newton's Laws of Motion- Conservation of Linear Momentum. Impulse- Collision- Centripetal force	Methodology lecture	References Halliday,Davi d and Robert Resnick. Murugeshan R. Electricity and Magnetism.	Evaluation
Nov. 21 - 28, 2016 (Day Order 1 to 6)	1.1. Centrifugal Forces –First and Second Order of Levers –Simple Machines	lecture	Halliday,Davi d and Robert Resnick. Naranyanamu rthi.M and Nagaratham. N. Dynamics.	Questioning on classes taught
Nov. 29 – Dec 5, 2016 (Day Order 1 to 6)	1.2.Experiments I Conservation of Linear Momentum II Centripetal and Centrifugal Forces III Simple Machines	Lecture and demonstration	Murugeshan R. Electricity and Magnetism.	
Dec 6 - 14, 2016 (Day Order 1 to 6)	Unit 2 Optics (9 hrs.) 2.1Light – Characteristics of Light- Reflection – Refraction – Interference – Diffraction - Polarization	Lecture	Halliday,Davi d and Robert Resnick.	Questioning on classes taught
Dec. 15 - 21, 2016 (Day Order 1 to 6)	2.1.Electromagnetic Spectrum- Microscope Telescope- Spectrometer	Lecture	Naranyanamu rthi.M and Nagaratham. N. <i>Dynamics</i> . Murugeshan R. <i>Electricity</i>	

			and	
			Magnetism.	
Jan. 03- 09, 2017	2.1.Laser-	Lecture and	Halliday,Davi	
	Stimulated Emission	demonstration	d and Robert	
(Day Order 1 to 6)	 Principle of Laser 		Resnick.	
	Action			
I 10 17 2017	225	T . 1	3.6	- TTT
Jan. 10- 17, 2017	2.2.Experiments	Lecture and demonstration	Murugeshan	Test – III
(Day Order 1 to 6)	i.Parts of Optical Instruments	demonstration	R. Electricity and	Component
	ii.Study of Spectrum		Magnetism.	
	Using Prism and			
	Transmission			
	Grating			
Jan. 18- 20, 2017	iii.Determination of	Lecture and	Naranyanamu	
(Day Order 1 to 3)	Thickness of Thin Wire Using LASER	demonstration	rthi.M and Nagaratham.	
	Wife Using LASER		N. Dynamics.	
Jan.23 - 28, 2017		C.A. Tests		
an.30 – Feb 01, 2017	Unit 3	Lecture and	Murugeshan	Questioning
·	Electricity	demonstration		
(Day Order 4 to 6)	3.1.Ohm's Law-	demonstration	R. Electricity	on classes
	Resistance in Series		and	taught
	and Parallel		Magnetism.	
Feb.02 - 09, 2017	Electromagnetic	Lecture	Naranyanamu	
(Day Order 1 to 6)	Induction- Lenz's		rthi.M and	
	Law-			
			Nagaratham.	
			N. Dynamics	
Feb.10 - 17, 2017	Magnetic Materials-	Lecture	Naranyanamu	
(Day Order 1 to 6)	Different Types of		rthi.M and	
,	Magnetic Materials-		Nagaratham.	
			N. Dynamics	
Feb.20 - 27, 2017	DC and AC-Three	Lecture	Murugeshan	Quiz- III
(Day Order 1 to 6)	Dhasa AC		R. Electricity	Component
	Phase AC		and	_
			Magnetism.	
Feb.28 – Mar 07, 2017	Experiments	Lecture and	Murugeshan	
(Day Order 1 to 6)	i.Verification of Ohm's Law	demonstration	R. Electricity	
	ii.Study of Magnetic		and	
	Properties Properties			
			Magnetism.	
26.06.16.50:-			<u></u>	
Mar. 06 - 16, 2017	C.	A. IMPROVEME	NT TESTS	

Mar. 08 - 15, 2017	Experiments	Lecture and	Naranyanamu	Questioning
(Day Order 1 to 6)	iii. Generation of EMF Using	demonstration	rthi.M and	on classes
	Induction Coil		Nagaratham.	taught
			N. Dynamics	
Mar. 16, 2017	REVISION			
(Day Order 1)				
Mar. 17 - 23, 2017			Ţ	,
(Day Order 2 to 6)		REVISION	N	
March 24, 2017				
(Day Order 1)				

Course Schedule – November 2016 – April 2017

Department : PHYSICS

Name/s of the Faculty : Ms. N.Neeraja & Sr. Nirmala

Course Title : THERMAL PHYSICS AND STATISTICAL MECHANICS

Course Code : 11PH/MC/TS24

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
No. 14 10 2016	TT .*4 4			Evaluation
Nov. 14 - 19, 2016	Unit 1	Lecture	Heat and	
(Day Order 1 to 6)	Radiation 1.1- Blackbody radiation-		Thermodynamics	
	distribution of energy in the		-Mathur.D.S	
	spectrum of a blackbody			
	Unit 2			
	Thermodynamics			
	2.1- Thermodynamic			
	systems-thermal equilibrium			
	and concept of temperature-			
	zeroth law of			
	Thermodynamics			
Nov. 21 - 28, 2016	1.1 - Experimental	Lecture	Heat and	Questioning on
(Day Order 1 to 6)	arrangement to study		Thermodynamics	the classes taught
	energy distribution		-	
	Experimental results		-Mathur.D.S	
	2.1- Concept of			
	temperature-zeroth law of			
	Thermodynamics			
	Thermodynamic processes-			
	internal energy			
Nov. 29 – Dec 5, 2016	1.1- Statements of Stefan-	Lecture and	Heat and	
(Day Order 1 to 6)	Boltzmann and Wiens' law-	problem	Thermodynamics-	
(a.)	Quantum theory of radiation	_	Subramanyan N	
	2.1-Thermodynamic	solving	and Brij Lal	
	processes- internal energy		3	
	2.2- First law of			
	thermodynamics-Isothermal			
	and adiabatic elasticity of a			
	gas			
Dec 6 – 14, 2016	1.2- Average energy of	Lecture and	Heat and	Questioning on
(Day Order 1 to 6)	planck's oscillator-Planck's	problem	Thermodynamics-	the classes taught
(,	hypothesis		Subramanyan N	
	2.2- First law of	solving	and Brij Lal	
	thermodynamics		Ţ	
Dec. 15 – 21, 2016	1.2- Planck's' radiation	Lecture	Heat and	Solving
(Day Order 1 to 6)	relation		Thermodynamics	numerical
•	2.2–Second law of		•	
	thermodynamics-Statements		–Mathur.D.S	problems- III

	of Clausius and Kelvin 2.2 –			Component
Jan. 03- 09, 2017 (Day Order 1 to 6)	heat engines and efficiency 5.1- Production of very low temperature and experiment 2.2 – heat engines and efficiency	Lecture	Heat and Thermodynamics- Subramanyan N and Brij Lal	
Jan. 10- 17, 2017 (Day Order 1 to 6)	5.1Adiabatic demagnetization of paramagnetic salt-theory 2.2-Thermodynamic potentials	Lecture	Heat and Thermodynamics -Mathur.D.S	Questioning on the classes taught
Jan. 18- 20, 2017 (Day Order 1 to 3)	5.2- Definition of phase space-micro and macro states 2.2-Thermodynamics of refrigeration-coefficient of performance	Lecture and problem solving	Heat and Thermodynamics -Mathur.D.S	
Jan.23 - 28, 2017		C.A. To	ests	
Jan.30 – Feb 01, 2017 (Day Order 4 to 6)	5.2- Ensembles-definition of Thermodynamic probability 3.2- Second law of thermodynamics in terms of entropy	Lecture	Heat and Thermodynamics -Mathur.D.S	
Feb.02 - 09, 2017 (Day Order 1 to 6)	5.2- Thermodynamic probability Unit 4 Maxwell's thermodynamical relations 4.1- Maxwell's thermodynamical relations	Lecture and problem solving	Heat and Thermodynamics -Mathur.D.S	Group presentation – III component
Feb.10 - 17, 2017 (Day Order 1 to 6)	5.2- Classical Statistics 4.2- deduction from thermodynamical relations	Lecture	Heat and Thermodynamics -Mathur.D.S	Questioning on the classes taught
Feb.20 - 27, 2017 (Day Order 1 to 6)	5.2-Maxwell-Boltzmann Statistics 4.2-1. First Tds equations	Lecture and problem solving	Heat and Thermodynamics -Mathur.D.S	
Feb.28 – Mar 07, 2017 (Day Order 1 to 6)	4.2- Second Tds equations	Lecture	Heat and Thermodynamics- Subramanyan N and Brij Lal	Questioning on the classes taught
Mar. 6 - 16, 2017	C.A	A. IMPROVEN	MENT TESTS	

Mar. 8 - 15, 2017 (Day Order 1 to 6)	4.2- 2. variation of intrinsic energy with volume	Lecture and problem solving	Heat and Thermodynamics- Subramanyan N and Brij Lal	Questioning on the classes taught
Mar. 16, 2017 (Day Order 1)	$4.2-3. C_p - C_v = R$ 4.2-4. Clapeyron latent heat equation	Lecture	Heat and Thermodynamics- Subramanyan N and Brij Lal	
Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 (Day Order 1)		REVISIO	ON	

Course Schedule – November 2016 – April 2017

PHYSICS

Department Name/s of the Faculty Dr.R.Shanmugasundari :

Course Title MATHEMATICAL PHYSICS

Course Code 15PH/MC/MP44

Shift I

Week & No. of	Units & Topics	Teaching	Text &	Method of
hours		Methodology	References	Evaluation
Nov. 14 - 19, 2016	Unit 1 Vector Calculus	Lecture -	Murray .Spiegel.	Problem
(Day Order 1 to 6)	1.1 Scalar Point Function -	Problem	Schaum's	solving
,	Gravitational Potential and	solving	Outline of theory	
	Electrostatic Potential - Vector Point		and Problems of	
	Function – Electric Intensity and		Vector Analysis	
	Magnetic Field		,	
Nov. 21 - 28, 2016	Directional Derivatives - Gradient of		Gupta B.D.	Review -
(Day Order 1 to 6)	a Scalar Field. 1.2 Vector		Mathematical	Questioning
	Differentiation – Determination of		Physics	
	Velocity and Acceleration From			
	Position Vector			
Nov. 29 – Dec 5,	Partial Differentiation of Vectors	Lecture -	Murray .Spiegel.	Quiz
2016	Unit 2 Vector Analysis 2.1 The	Problem	Schaum's	
(Day Order 1 to 6)	Divergence of a Vector Function - the	solving	Outline of theory	
	Curl or Rotation of a Vector Function		and Problems of	
	-		Vector Analysis	
Dec 6 - 14, 2016	Geometrical Interpretation - Physical	Lecture -	Gupta B.D.	Problem
(Day Order 1 to 6)	Significance.	Problem	Mathematical	solving
	2.2 Relations between Gradient,	solving	Physics	
	Divergence and Curl			
Dec. 15 – 21, 2016	Electrostatic Potential and Field –		Gupta B.D.	III Comp.
(Day Order 1 to 6)	Maxwell's Equations.		Mathematical	Problem
			Physics	test
Jan. 03- 09, 2017	Unit 3 Vector Integration	Presentation	Satyaprakash.	Problem
(Day Order 1 to 6)	3.1 Vector Integration: Ordinary		Mathematical	solving
	Integrals of Vectors - Line Integrals -		Physics	
	Surface Integrals - Volume Integrals			
Jan. 10- 17, 2017	3.2 Gauss's Theorem - Statement and			III Comp
(Day Order 1 to 6)	Physical Interpretation - Stoke's			Presentation
	Theorem and Green's Theorem			
	(Statement Only)			
Jan. 18- 20, 2017	Poisson's Equation and Laplace's		Gupta B.D.	
(Day 1 to 3)	Equations - Revision		Mathematical	
			Physics	

Jan.23 - 28, 2017	C.A. Tests			
Jan.30 – Feb 01,	Vector Integration Applications in	Lecture		Review -
017	Gravitation, Hydrodynamics and			Questioning
(Day 4 to 6)	Electromagnetism.			
Feb.02 - 09, 2017	Unit 4 Differential Equations		Bronson Richard	Problem
(Day Order 1 to 6)	4.1 Initial and Boundary Value		Schaum's	solving
	Problems - Applications of First		Outline of theory	
	Order Differential Equations - Falling		and Problems of	
	Body Problems - Electrical Circuits		Differential	
	(RL and RC).		Equations	
Feb.10 - 17, 2017	4.2 Second Order Differential	Lecture		Problem
(Day Order	Equations with Constant Coefficients:		,,	solving
	The Characteristic Equation – General			
	Solutions - Applications of Second			
	Order Differential Equations			
Feb.20 - 27, 2017	(i) System of Springs (ii) Electrical	Lecture -	Modern Algebra	Review -
(Day Order 1 to 6)	Circuits (LCR). Unit 5 Group	Problem	by Arumugam	Questioning
	Theory	solving		
	5.1 Group Theory - Definition of			
	Groups Subgroups -			
Feb.28 – Mar 07,	Symmetry Elements Transformation -			III Comp
(Day 1 to 6)	Point Groups - Representation of a		,,	Problem
	Group.			test
Mar. 06 - 16, 2017	C.A. IMP	ROVEMENT T	ESTS	
Mar. 08 - 15, 2017	5.2 Applications of Group Theory –	Lecture -		Problem
(Day Order 1 to 6)	Elementary Particles - Application to	Problem	,,	solving
	IR and Raman Active Vibrations.	solving		
Mar. 16, 2017(Day	Problem solving in Unit 5			
Order 1)				
Mar. 17 - 23, 2017				
(Day Order 2 to 6)		REVISION		
March 24, 2017				
(Day Order 1)				

Course Schedule – November 2016 – April 2017

Department : PHYSICS

Name/s of the Faculty : Dr. K. H. Rajini and Ms. Anceila. D

Course Title : Physics for Chemistry - II

Course Code : 15PH/AC/PC43

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Nov. 14 - 19, 2016 (Day Order 1 to 6) 1 + 2	Unit 1 1.1Coulomb's law of inverse squares electric field 1.2 Conservative nature of electrostatic field – electric field electric potential	Lecture	Allied physics by Murugesan. R	Questioning
Nov. 21 - 28, 2016 (Day Order 1 to 6) 1 + 2	1.1 definition flux of electric field Gauss's law 1,2 potential at a point due to point charge relation between them	Lecture	Allied physics by Murugesan. R	Questioning
Nov. 29 – Dec 5, 2016 (Day Order 1 to 6) 1 + 2	1.1 application of Gauss's law 1.3.Capacitance: principle- capacitance of a parallel plate	Lecture	Electricity and Magnetism by Tiwari	Review - Questioning
Dec 6 - 14, 2016 (Day Order 1 to 6) 1 + 2	1.1 field due to spherical charge distribution and plane infinite sheet 1.3 capacitor with and without dielectric	Lecture	Electricity and Magnetism by Tiwari	Review - Questioning
Dec. 15 - 21, 2016 (Day Order 1 to 6) 1 + 2	1.1 field due to point charge and cylindrical distribution 2.1 Magnetic field: definition of B force on a charge in a magnetic field –	Lecture	Electricity and Magnetism by Tiwari	Review - Questioning

Jan. 03- 09, 2017	Unit 4	Lecture	Laser physics by	Problem Test - III
(Day Order 1 to 6)	4.1MASER:			Component
	Ammonia MASER		B.B. Laud	
1 + 2	2.1 force on a charge		Electricity and	
	in an electro		Magnetism	
	magnetic field		by	
			Brijlal and Subramanian	
Jan. 10- 17, 2017	4.2 LASER :-	Lecture	Laser physics by	Questioning
Jan. 10- 17, 2017	Carbon dioxide	Lecture	Laser physics by	Questioning
(Day Order 1 to 6)	LASER –		B.B. Laud	
1 + 2	applications		Electricity and	
1 1 2	2.2 Maxwell's		Magnetism	
	electromagnetic		by	
	equations - physical		Brijlal and	
	significance		Subramanian	
Jan. 18- 20, 2017	2.3 Magnetic		Electricity and	
(Day Order 1 to 3)	properties of		Magnetism	
(Day Oluci 1 to 3)	materials		by	
1			Brijlal and	
			Subramanian	
Jan.23 - 28, 2017		C.A. '	Tests	
I 20 F.I 01 2017	4211 1	T .	T 1 · 1	
Jan.30 – Feb 01, 2017	4.3 Holography:	Lecture	Laser physics by	
(Day Order 4 to 6)	principles – preparation of		B.B. Laud	
2	holograms		D.D. Lauu	
2	2.3 hysterisis-			
	magnetometer			
	method of drawing			
	hysterisis curve-			
	energy laws			
Feb.02 - 09, 2017	4.3 Holography:	Lecture	Laser physics by	Questioning
,	preparation of			
(Day Order 1 to 6)	holograms		B.B. Laud	
1 + 2	Unit 3			
	3.1Electromagnetism			
	force on a current			
	carrying conductor			
	in a magnetic field –	_		
Feb.10 - 17, 2017	4.3 Holography:	Lecture	Laser physics by	Questioning
(Day Order 1 to 6)	Applications			
	3.2 moving coil		B.B. Laud	
1 + 2	ballistic		Electronics by	
	galvanometer -r charge and current		V.K. Mehta	
	sensitivity		v.ix. ivicilla	
Feb.20 - 27, 2017	4.4 Fibre Optics	Lecture	Laser physics by	Assignment - III
	principles –			Component
(Day Order 1 to 6)	characteristics		B.B. Laud	
1	<u> </u>	ı	ı	1

1 + 2	Unit 5		Electronics by	
1 + 2	5.1 Operational		Electronics by	
	L		X7 IZ M1.4.	
	amplifier – ideal		V.K. Mehta	
	op- amp - CMRR –			
	inverting and non-			
	inverting			
Feb.28 – Mar 07,	4.4 Fibre Optics	Lecture	Laser physics by	Questioning
2017	classification –			
	5.1 op- amp -		B.B. Laud	
(Day Order 1 to 6)	summing, difference,		Electronics by	
1 + 2	integral and			
1 + 2	differential op- amp.		V.K. Mehta	
Mar. 06 - 16, 2017		C.A. IMPROVE	EMENT TESTS	
Mar. 08 - 15, 2017	4.4 Fibre Optics	Lecture	Laser physics by	Questioning
	Applications			
(Day Order 1 to 6)	5.2 Digital		B.B. Laud	
1 + 2	electronics : number		Electronics by	
	system – decimal to			
	binary conversion –		V.K. Mehta	
	binary addition-		, , , , , , , , , , , , , , , , , , ,	
	subtraction –			
	multiplication –			
	division			
Mar. 16, 2017	5.2 problems in	Lecture	Electronics by	
1viai. 10, 2017	digital number	Lecture	Licenomics by	
(Day Order 1)			V.K. Mehta	
1	system		v.K. Menta	
1				
Mar. 17 - 23, 2017				
(Day Order 2 to 6)		REVIS	SION	
March 24, 2017				
(Day Order 1)				

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty : Ms. N. Neeraja & Ms. D. Anceila

Course Title : Home Electrical Installations

Course Code : 15PH/GE/HE23

Week & No. of hours	Units & Topics	Teaching	Text &	Method of
N 11 10 2016	** * * * *	Methodology	References	Evaluation
Nov. 14 - 19, 2016	Unit 1 Basic	Lecture Cum	Basic Electrical	
(Day Order 1 to 6)	Electric Circuits 1.1.Introduction to	demonstration	Installation Work. Lindslaey Trevor.	
	electricity Basic Facts: Electric Circuits – Basic Components Used in an Electric Circuit – Complete Circuit- Unit 4 Demonstration and Hands on training- I Introduction to simple circuits			
Nov. 21 - 28, 2016	1.1.Lighting Circuits	Lecture Cum	Basic Electrical	Problem solving
(Day Order 1 to 6)	Series and ParallelCircuits -Switches –Types of Switches	demonstration	Installation Work. Lindslaey Trevor.	
	4.1.Experiments on Closed, Open, Short, Series and Parallel Circuits.			
Nov. 29 – Dec 5, 2016	1.1.Plugs and Its	Lecture Cum	Basic Electrical	Questioning on
(Day Order 1 to 6)	Types – Safety Practices and Measurements 4.2. Wiring Practice of Switches and	demonstration	Installation Work. Lindslaey Trevor.	the classes taught
	Plugs.			
Dec 6 - 14, 2016	1.2.Introduction to	Lecture	Electricity and	
(Day Order 1 to 6)	AC and DC. Principles of Single Phase and Three Phase Connections.		Magnetism Brijlal & Subramaniyam	
	i hase connections.			

Dec. 15 - 21, 2016	Unit 2	Lecture Cum	Basic Electrical	Quiz- III
(Day Order 1 to 6)	Electrical	demonstartion	Installation Work.	Component
(Day Order 1 to 6)	Connections		Lindslaey Trevor.	
	2.1.Introduction to			
	Fuses-Fuse Wire –			
	Melting Point –			
	Causes and			
	Repairing a Fuse-			
	the Earth Wire –			
Jan. 03- 09, 2017	Lightning Conductor 2.2.Using and	Lecture problem	Basic Electrical	Problem solving
·	Paying for	solving	and Electronics	1 Toblem Solving
(Day Order 1 to 6)	Electricity-	SOLVING	G. Nagarajan	
	Consumption		O. Tagarajan	
Jan. 10- 17, 2017	2.2. Working of	Lecture	Basic Electrical	
	KWH- Meters .	-	and Electronics	
(Day Order 1 to 6)	Unit 5		G. Nagarajan	
	Demonstration and			
	Hands on training-			
	II			
	5.1. Replacing Fuses			
T 10 20 2017	TI MATERIAL I	I	D ' E1 . ' 1	
Jan. 18- 20, 2017	Unit 3 Electrical	Lecture Cum	Basic Electrical	
(Day Order 1 to 3)	Appliances 3.1.Electric Iron	demonstration	Installation Work.	
	5.1.Electric iron		Lindslaey Trevor. Electrical	
			appliance Anwani	
Jan.23 - 28, 2017		С.А. Т		
Jan. 25 20, 2017		C./1. 1		
Jan.30 – Feb 01, 2017	3.1.Heater	Lecture cum		Questioning on
(Day Ordan 1 to 6)	4.3. Measurement of	demonstration		the classes taught
LLIAV CHOPT 4 IO DI				
(Day Order 4 to 6)	Current and Voltage			
(Day Order 4 to 6)	Current and Voltage Using Multimeter.			
	Using Multimeter.		D. C. T.	C
Feb.02 - 09, 2017	Using Multimeter. 3.1. Microwave	Lecture Cum	Basic Electrical	Report
	Using Multimeter. 3.1. Microwave Oven- Incandescent	Lecture Cum demonstration	Installation Work.	Report submission on
Feb.02 - 09, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent			Report submission on power
Feb.02 - 09, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent		Installation Work.	Report submission on power consumption of
Feb.02 - 09, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent		Installation Work.	Report submission on power consumption of various
Feb.02 - 09, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent		Installation Work.	Report submission on power consumption of various appliances at
Feb.02 - 09, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent		Installation Work.	Report submission on power consumption of various appliances at home (III
Feb.02 - 09, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent		Installation Work.	Report submission on power consumption of various appliances at
Feb.02 - 09, 2017 (Day Order 1 to 6) Feb.10 - 17, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent Lamps	demonstration	Installation Work. Lindslaey Trevor.	Report submission on power consumption of various appliances at home (III
Feb.02 - 09, 2017 (Day Order 1 to 6)	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent Lamps 3.1. Working of	demonstration	Installation Work. Lindslaey Trevor. Basic Electrical	Report submission on power consumption of various appliances at home (III
Feb.02 - 09, 2017 (Day Order 1 to 6) Feb.10 - 17, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent Lamps 3.1. Working of CFL-Starter 3.1. Inverter-	demonstration	Installation Work. Lindslaey Trevor. Basic Electrical Installation Work.	Report submission on power consumption of various appliances at home (III
Feb.02 - 09, 2017 (Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent Lamps 3.1. Working of CFL-Starter 3.1. Inverter- Electric Fan-	demonstration	Installation Work. Lindslaey Trevor. Basic Electrical Installation Work. Lindslaey Trevor.	Report submission on power consumption of various appliances at home (III
Feb.02 - 09, 2017 (Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6)	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent Lamps 3.1. Working of CFL-Starter 3.1. Inverter- Electric Fan- Regulator (SCR)-	demonstration	Installation Work. Lindslaey Trevor. Basic Electrical Installation Work. Lindslaey Trevor. Electronics	Report submission on power consumption of various appliances at home (III
Feb.02 - 09, 2017 (Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent Lamps 3.1. Working of CFL-Starter 3.1. Inverter- Electric Fan-	demonstration	Installation Work. Lindslaey Trevor. Basic Electrical Installation Work. Lindslaey Trevor. Electronics	Report submission on power consumption of various appliances at home (III
Feb.02 - 09, 2017 (Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017	Using Multimeter. 3.1. Microwave Oven- Incandescent and Fluorescent Lamps 3.1. Working of CFL-Starter 3.1. Inverter- Electric Fan- Regulator (SCR)-	demonstration	Installation Work. Lindslaey Trevor. Basic Electrical Installation Work. Lindslaey Trevor. Electronics	Report submission on power consumption of various appliances at home (III

Feb.28 – Mar 07, 2017 (Day Order 1 to 6)	3.2. Rice Cooker(Thermostat)- 5.2. A Model of House Wiring	Lecture Cum demonstration	Basic Electrical Installation Work. Lindslaey Trevor.	Questioning on the classes taught
Mar. 06 - 16, 2017		C.A. IMPROVE	MENT TESTS	
Mar. 08 - 15, 2017 (Day Order 1 to 6)	3.2. Voltage Stabilizer 5.3. Tubelight Connection	Lecture Cum demonstration	Basic Electrical Installation Work. Lindslaey Trevor.	
Mar. 16, 2017 (Day Order 1)	REVISION			
Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 (Day Order 1)		REVIS	SION	

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty : Ms. D. Anceila

Course Title : Home Electrical Installations

Course Code : 15PH/GE/HE23

Week & No. of hours	Units & Topics	Teaching	Text &	Method of
		Methodology	References	Evaluation
Nov. 14 - 19, 2016	Unit 1 Basic	Lecture Cum	Basic Electrical	
(Day Order 1 to 6)	Electric Circuits 1.1.Introduction to	demonstration	Installation Work. Lindslaey Trevor.	
	electricity Basic Facts: Electric Circuits – Basic Components Used in an Electric Circuit – Complete Circuit			
Nov. 21 - 28, 2016 (Day Order 1 to 6)	1.1.Lighting Circuits – Series and Parallel Circuits -Switches – Types of Switches	Lecture Cum demonstration	Basic Electrical Installation Work. Lindslaey Trevor.	Problem solving
Nov. 29 – Dec 5, 2016	1.1.Plugs and Its	Lecture Cum	Basic Electrical	Questioning on
(Day Order 1 to 6)	Types – Safety Practices and Measurements Unit 4 Demonstration and Hands on training- I 4.1.Experiments on Closed, Open, Short, Series and Parallel Circuits.	demonstration	Installation Work. Lindslaey Trevor.	the classes taught
Dec 6 - 14, 2016 (Day Order 1 to 6)	1.2.Introduction to AC and DC. Principles of Single Phase and Three Phase Connections. 4.2.Wiring Practice of Switches and Plugs.	Lecture	Electricity and Magnetism Brijlal & Subramaniyam	

Dec. 15 - 21, 2016	Unit 2	Lecture Cum	Basic Electrical	Quiz- III
	Electrical	demonstartion	Installation Work.	Component
(Day Order 1 to 6)	Connections	demonstartion	Lindslaey Trevor.	Component
	2.1.Introduction to		Emasiacy Tievor.	
	Fuses-Fuse Wire –			
	Melting Point –			
	Causes and			
	Repairing a Fuse-			
	the Earth Wire –			
	Lightning Conductor			
Jan. 03- 09, 2017	2.2.Using and	Lecture problem	Basic Electrical	Problem solving
Jan. 05- 09, 2017	Paying for	solving	and Electronics	1 Toolem solving
(Day Order 1 to 6)	Electricity-	Solving	G. Nagarajan	
	Consumption		G. Ivagarajan	
Jan. 10- 17, 2017	2.2. Working of	Lecture	Basic Electrical	Questioning on
·	KWH- Meters .	Lecture	and Electronics	the classes taught
(Day Order 1 to 6)	Unit 5		G. Nagarajan	uic ciasses taugiit
	Demonstration and		O. Magarajan	
	Hands on training-			
	II			
	5.1. Replacing Fuses			
	3.1. Replacing Puses			
Jan. 18- 20, 2017	Unit 3 Electrical	Lecture Cum	Basic Electrical	
·	Appliances	demonstration	Installation Work.	
(Day Order 1 to 3)	3.1.Electric Iron	demonstration	Lindslaey Trevor.	
	3.1.Electric from		Electrical	
			appliance Anwani	
Jan.23 - 28, 2017		С.А. Т		
20, 2017				
Jan.30 – Feb 01, 2017	3.1.Heater	Lecture cum		
1	4.3. Measurement of	demonstration		
(Day Order 4 to 6)	Current and Voltage			
	Using Multimeter.			
	5			
Feb.02 - 09, 2017	3.1. Microwave	Lecture Cum	Basic Electrical	Report
ĺ	Oven- Incandescent	demonstration	Installation Work.	submission on
(Day Order 1 to 6)	and Fluorescent		Lindslaey Trevor.	power
	Lamps			consumption of
				various
				appliances at
				home.
Feb.10 - 17, 2017	3.1. Working of	Lecture	Basic Electrical	
	CFL-Starter		Installation Work.	
(Day Order 1 to 6)			Lindslaey Trevor.	
Feb.20 - 27, 2017	3.1. Inverter-	Lecture	Electronics	
	Electric Fan-		V.K. Mehtha	
(Day Order 1 to 6)	Regulator (SCR)-			
	Control Rheostat			
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Feb.28 – Mar 07, 2017 (Day Order 1 to 6)	3.2. Rice Cooker(Thermostat)- 5.2. A Model of House Wiring	Lecture Cum demonstration	Basic Electrical Installation Work. Lindslaey Trevor.	Questioning on the classes taught
Mar. 06 - 16, 2017		C.A. IMPROVE	MENT TESTS	
Mar. 08 - 15, 2017 (Day Order 1 to 6)	3.2. Voltage Stabilizer 5.3. Tubelight Connection	Lecture Cum demonstration	Basic Electrical Installation Work. Lindslaey Trevor.	Questioning on the classes taught
Mar. 16, 2017 (Day Order 1)	REVISION			
Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017	REVISION			
(Day Order 1)				

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty
Course Title
:Sr.G.Francisco Nirmala FMM
:Fundamentals of Nanoscience

Course Code : 15PH/AE/FN45

Week & No. of hours	Units & Topics	Teaching	Text &	Method of
		Methodology	References	Evaluation
Nov. 14 - 19, 2016	Unit 1	Lecture with	Pradeep T.	Group interaction
(Day Order 1 to 6)	Introduction- Nano	Power Point	Nano: The	
	and Nature	Projection	Essentials.	
Nov. 21 - 28, 2016	Background to	lecture	Pradeep T.	Question and
(Day Order 1 to 6)	Nanotechnology-		Nano: The	answer session
	Nanoscale		Essentials.	
	Bulk to Nano		D. Miller John,	
	Transition		A Hand Book on	
	Transition		Nanophysics.	
Nov. 29 – Dec 5, 2016	Nanosize Effects -	Lecture com	Pradeep T.	Group
(Day Order 1 to 6)	Size Dependent	demonstration	Nano: The	presentation –
(Buy Graci 1 to 0)	Phenomena -	demonstration	Essentials.	III component
	Quantum		Essentiais.	Tir component
	Confinement		D. Miller John,	
	Commement		A Hand Book on	
			Nanophysics.	
Dec 6 - 14, 2016	Unit-2	Lecture com	GuoZhong Cao.	Question and
(Day Order 1 to 6)	Metal	demonstration	Nanostructures	answer session
(Duy Order 1 to 0)	nanoparticles:	demonstration	and	answer session
	Structural and		Nanomaterials.	
	Optical Properties		1 tanomaterials.	
	Optical Properties		Viswanathan B.	
			Nano Materials.	
			Tano Materials.	
Dec. 15 - 21, 2016		Lecture with	GuoZhong Cao.	Group discussion
(Day Order 1 to 6)	Semiconductor	video clippings	Nanostructures	1
, •	Nanoparticles:	11 0	and	
	Semiconductor		Nanomaterials.	
	Quantum Dots,			
	Correlation of		Viswanathan B.	
	Properties with		Nano Materials.	
	Size			
Jan. 03- 09, 2017	Carbon		GuoZhong Cao.	Group
(Day Order 1 to 6)	Nanostructures:		Nanostructures	presentation – III
• • • • • • • • • • • • • • • • • • • •	Introduction-		and	component
	FullerenesCNT-		Nanomaterials.	
	Graphene-			
	Properties	Lecture		
Jan. 10- 17, 2017	Unit – 3	Lecture with	Pradeep T. Nano:	Question and
(Day Order 1 to 6)		video clipping	The Essentials.	answer session
(Day Order 1 to 6)		video clipping	The Essentials.	answer session

	Physical Method:			
	Ball Milling,			
L. 10 20 2017	Sputter Deposition	I 4	Viswanathan B.	C 1:
Jan. 18- 20, 2017 (Day Order 1 to 3)	Chemical Methods: Co-	Lecture cum demonstration	Nano Materials.	Group discussion
(Day Order 1 to 3)	Precipitation- Sol-	demonstration	Nano Materiais.	
	Gel Synthesis-			
	Solvothermal			
Jan.23 - 28, 2017		C.A.	Tests	1
I 20 E 1 01 2017		1	77' (1 D	
Jan.30 – Feb 01, 2017	IIait 2		Viswanathan B.	
(Day Order 4 to 6)	Unit – 3	Lecture cum	Nano Materials.	Question and
	Bio Synthesis of	demonstration		Answer Session
	Nanoparticles	demonstration		Allswer Session
	(Metal Nano			
	Particles Au, Ag)			
	Von our M-41 1			
	Vapour Method- Thermal			
	Evaporation-			
	Chemical Vapour			
	Deposition (CVD)			
	Deposition (C (D)			
7.1.02.00.				
1 12-1-02 00 2017		T4	V.: D	C
Feb.02 - 09, 2017	Unit 1	Lecture with	Viswanathan B.	Group
Feb.02 - 09, 2017 (Day Order 1 to 6)	Unit 4	power point	Viswanathan B. Nano Materials.	discussion - III
1	Introduction		Nano Materials.	
1	Introduction Powder X-Ray	power point	Nano Materials. Pradeep T. Nano:	discussion - III
(Day Order 1 to 6)	Introduction Powder X-Ray Diffraction	power point presentation	Nano Materials. Pradeep T. Nano: The Essentials.	discussion - III component
· ·	Introduction Powder X-Ray	power point	Nano Materials. Pradeep T. Nano:	discussion - III
(Day Order 1 to 6) Feb.10 - 17, 2017	Introduction Powder X-Ray Diffraction Scanning Electron	power point presentation	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano:	discussion - III component Group presentation – III
(Day Order 1 to 6) Feb.10 - 17, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)-	power point presentation	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano:	discussion - III component Group
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6)	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM)	power point presentation Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials.	Group presentation – III component
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis	power point presentation	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano:	Group presentation – III component Question and
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6)	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption	power point presentation Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials.	Group presentation – III component
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy-	power point presentation Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano:	Group presentation – III component Question and
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo	power point presentation Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano:	Group presentation – III component Question and
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6)	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence	power point presentation Lecture Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials.	Group presentation – III component Question and answer session
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo	power point presentation Lecture Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Viswanathan B.	discussion - III component Group presentation – III component Question and answer session
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6)	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence Unit 5	power point presentation Lecture Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials.	Group presentation – III component Group presentation – III component Question and answer session Group presentation – III
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence	power point presentation Lecture Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Viswanathan B.	discussion - III component Group presentation – III component Question and answer session
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence Unit 5 Applications in	power point presentation Lecture Lecture	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Viswanathan B.	Group presentation – III component Group presentation – III component Question and answer session Group presentation – III
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 – Mar 07, 2017 (Day Order 1 to 6)	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence Unit 5 Applications in Chemical	power point presentation Lecture Lecture Lecture cum demonstration	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Viswanathan B. Nano Materials.	Group presentation – III component Question and answer session Group presentation – III
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence Unit 5 Applications in Chemical Sciences: Solar Cells	power point presentation Lecture Lecture Lecture cum demonstration	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Viswanathan B. Nano Materials.	Group presentation – III component Question and answer session Group presentation – III component
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence Unit 5 Applications in Chemical Sciences: Solar Cells Catalysis Photo-	power point presentation Lecture Lecture Lecture cum demonstration	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Viswanathan B. Nano Materials. EMENT TESTS Viswanathan B.	Group presentation – III component Question and answer session Group presentation – III component
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence Unit 5 Applications in Chemical Sciences: Solar Cells Catalysis Photo- catalytic	power point presentation Lecture Lecture Lecture cum demonstration	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Viswanathan B. Nano Materials.	Group presentation – III component Question and answer session Group presentation – III component
(Day Order 1 to 6) Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017	Introduction Powder X-Ray Diffraction Scanning Electron Microscope(SEM)- Transmission Electron Microscope(TEM) UV-Vis Absorption Spectroscopy- Photo Luminescence Unit 5 Applications in Chemical Sciences: Solar Cells Catalysis Photo-	power point presentation Lecture Lecture Lecture cum demonstration	Nano Materials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Pradeep T. Nano: The Essentials. Viswanathan B. Nano Materials. EMENT TESTS Viswanathan B.	Group presentation – III component Question and answer session Group presentation – III component

	Life Sciences: Biosensors,		Jr. Frank J. Owens. Introduction to Nanotechnology.	
Mar. 16, 2017 (Day Order 1)	Nanomedicine, Drug Delivery.	Lecture	P. Poole Charles, Jr. Frank J. Owens. Introduction to Nanotechnology.	Question and answer session
Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 (Day Order 1)		F	REVISION	

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty : Dr. K. H. Rajini
Course Title : Nuclear Physics
Course Code : 11PH/MC/NP64

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Nov. 14 - 19, 2016 (Day Order 1 to 6) 5 Nov. 21 - 28, 2016	Unit 1 1.1 Nuclear density, binding energy per nucleon, packing fraction, nuclear stability, magnetic moment, 1.1.nuclear radius	Lecture	Atomic and Nuclear Physics by A.B. Gupta and Dipak Ghosh	Review Review
(Day Order 1 to 6) 5	determination, nuclear charge determination 1.1nuclear force, meson theory of nuclear force	Lecture	,,	
Nov.29 - Dec 5, 2016 (Day Order 1 to 6) 5	1.2. Nuclear model, liquid drop model, semi empirical mass formula magic numbers	Lecture	,,	
Dec 6 - 14, 2016 (Day Order 1 to 6) 5	Unit 2 2.1 Laws of radioactivity Decay constant, Half life, mean Life, Law of successive disintegration, radioactive equilibrium	Lecture	Nuclear Physics by Murugesan	
Dec. 15 - 21, 2016 (Day Order 1 to 6) 5	2.1 alpha decay, beta decay, gamma decay principles of internal conversion - interaction of gamma ray with matter,	Lecture	Atomic and Nuclear Physics by A.B. Gupta and Dipak Ghosh	
Jan. 03- 09, 2017 (Day Order 1 to 6) 5	2.2. units of radioactivity, radiation effects Unit 3 3.1. Detectors: ionisation chamber,	Lecture PPT	Atomic Physics by J.B.Rajam	Questioning

Jan. 10- 17, 2017	3.1 Geiger Muller		Nuclear Physics	Problem Test -
(Day Order 1 to 6)	counter			III Component
	- characteristics,	Lecture	by Murugesan	
5	scintillation counter, nuclear emulsion			
	technique			
Jan. 18- 20, 2017	3.1 Accelerators : Van			Questioning
(Day Order 1 to 3)	de Graff generator, linear accelerator,	Lastuma	,,	
3	inear accelerator,	Lecture		
Jan.23 - 28, 2017		C.A. To	ogta	
Jan.23 - 20, 2017		C.A. 10	esis	
		,		
Jan.30 – Feb 01,	3.1 cyclotron,		Nuclear Physics	Review
2017	synchrotron, synchrocyclotron	Lecture	by Murugesan	Questioning
(Day Order 4 to 6)	Synchrocyclotion	Lecture	oj maragosan	Questioning
2				
Feb.02 - 09, 2017	Unit 4			Questioning
	4.1 Nuclear reactions			Questioning
(Day Order 1 to 6)	– Q value, threshold	Lecture	,,	
5	value – endoergic	DD.		
	reaction, artificial radioactivity,	PPT		
	radioisotopes, uses			
Feb.10 - 17, 2017	4.2 Nuclear fission –		Atomic and	Questioning
(Day Order 1 to 6)	chain reaction –	T	N. I. DI.	
5	controlled and uncontrolled,	Lecture	Nuclear Physics by	
3	multiplication factor –		A.B. Gupta and	
	four factor formula,			
	powerreactors, reactors		Dipak Ghosh	
Feb.20 - 27, 2017	in India, 4.2 nuclear fusion,			Quiz- III
,	thermonuclear			Component
(Day Order 1 to 6)	reaction, C- N cycle,	Lecture	,,	
5	proton - proton cycle,			
	plasma			
	5.1 Elementary			
	particles, leptons,			
Feb.28 – Mar 07,	mesons, baryons, Unit 5			
	5.1 fundamental			
2017	interactions, their	Lecture PPT	,,	
(Day Order 1 to 6)	strength,			
5	antiparticle, strange particles, quarks			
	parties, quanto			
	5.1Conservation Laws			

Mar. 06 - 16, 2017		C.A. IMPROVEMENT TESTS			
Mar. 08 - 15, 2017	5.2 Nuclear resonance		Basic principles	Questioning	
(Day Order 1 to 6)	Spectroscopy - NMR introduction,	Lecture	of Spectroscopy		
5	experimental technique,	Lecture	by		
	applications		Chang, Raymond		
Mar. 16, 2017	5.2 NQR				
(Day Order 1)	introduction,	I a storm	,,		
1	experimental technique, applications	Lecture			
1	аррисация				
Mar. 17 - 23, 2017					
(Day Order 2 to 6)		REVISI	ON		
March 24, 2017					
(Day Order 1)					

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty : Ms. A. Suganthi Lark

Course Title : Semiconductor Electronics

Course Code : 11PH/MC/SE64

Week & No. of hours	Units & Topics	Teaching	Text &	Method of
	_	Methodology	References	Evaluation
Nov. 14 - 19, 2016	Syllabus	Lecture	Allen	
(Day Order 1 to 6)	introduction		Mottershead,	
(Day Order 1 to 6)	UNIT I		(1982),	
	1.1Transistor		Electronic	
	Biasing Biasing of		Devices and	
	transistor – faithful		Circuits, Prentice	
	amplification -		Hall of India Pvt.	
	stability factor-		Ltd., New Delhi.	
	problems			
Nov. 21 - 28, 2016	1.2 Methods of	Lecture		Questioning on
(Day Orden 1 to 6)	transistor biasing-			the classes taught
(Day Order 1 to 6)	base resistor			
	method - voltage			
	divider bias			
	method - problems			
	- operating point			
Nov. 29 – Dec 5, 2016	load line analysis	Lecture and		
(Day Onder 1 to 6)	– DC load lines -	problem solving		
(Day Order 1 to 6)	AC load lines -			
	problems			
Dec 6 - 14, 2016	UNIT II	Lecture	Allen	Questioning on
(Day Order 1 to 6)	Transistor		Mottershead,	the classes taught
(Day Order 1 to 0)	Amplifiers 2.1		(1982),	
	Introduction-single		Electronic	
	stage transistor		Devices and	
	amplifier -		Circuits, Prentice	
	practical circuit of		Hall of India Pvt.	
	transistor amplifier		Ltd., New Delhi.	
	- Solving Problems			
	- multistage			
	transistor			
	2.2 RC Coupled			
	transistor amplifier			
	– operation –			
	frequency response			
	- advantages –			
	disadvantages			
	Solving Problems			

Dec. 15 - 21, 2016	UNIT III	Lecture and	Allen	
(Day Order 1 to 6)	semiconductor devices 3.1 Field effect transistors – JFET	problem solving	Mottershead, (1982), Electronic Devices and Circuits, Prentice	Test -III Component
	working –channelconductance –space chargedistribution		Hall of India Pvt. Ltd., New Delhi.	
Jan. 03- 09, 2017	3.1.difference	Lecture		
(Day Order 1 to 6)	between JFET and bipolar transistor - JFET as an amplifier —			
Jan. 10- 17, 2017	3.1.IV	Lecture and		Questioning on
(Day Order 1 to 6)	characteristics – pinch off voltage – parameters of JFET.	problem solving		the classes taught
Jan. 18- 20, 2017	3.2. Uni junction	Lecture	Malvino Albert	
(Day Order 1 to 3)	transistor – construction – operation – interbase resister – equivalent circuit – intrinsic stand off ratio – IV characteristics – peak voltage valley current – valley voltage negative resistance region – relaxation oscillator.		Paul and Leach Donald, <u>Digital</u> Principles and Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi,(1981).	
Jan.23 - 28, 2017		C.A. '	Tests	
Jan.30 – Feb 01, 2017 (Day Order 4 to 6)	UNIT IV 4.1 Deferential amplifier – CMRR – operational amplifier- functional diagram – virtual ground – non inverting – inverting modes of operation – gain equation.		Gayakwad, R.A, Op. Amps & Linear Integrated Circuits, Prentice Hall, New Delhi(1998).	
Feb.02 - 09, 2017	4.2 Operational	Lecture and	Gayakwad, R.A,	Problem Test -
(Day Order 1 to 6)	amplifier application – adder- subtractor -	problem solving	Op. Amps & Linear Integrated	III Component

scale and sign changer — differentiator — integrator – voltage follower — Groupt attion — solution of simultaneous equations — differential equation — solution of simultaneous equations — differential equation — solution of simultaneous equations — differential equation — S.1. Weighted resistor D/A converter — S.1. Weighted resistor D/A converter — R. – 2R ladder — Lecture — Principles and Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi, (1981). Feb. 28 – Mar 07, 2017 (Day Order 1 to 6) Mar. 06 – 16, 2017 — S.2. A/D conversion Usy Converter — S.2. A/D converter — S.3. Lecture — S.4. Lecture — C.A. IMPROVEMENT TESTS C.A. IMPROVEMENT TESTS REVISION REVISION REVISION			1	G: 1. B .:	
differentiator integrator - voltage follower		scale and sign		<u>Circuits</u> , Prentice	
Integrator - voltage follower Seb.10 - 17, 2017 A.3 Electronic analog computation - solution of simultaneous equations - differential equation				· · · · · · · · · · · · · · · · · · ·	
Feb. 10 - 17, 2017 (Day Order 1 to 6) Feb. 20 - 27, 2017 (Day Order 1 to 6) Feb. 28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 A 3. Electronic analog computation and computation a solution of simultaneous equations - solution of simultaneous equations - differential equation Lecture Malvino Albert Paul and Leach Donald, Digital Principles and Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi, (1981). Lecture Mar. 07, 2017 (Day Order 1 to 6) C.A. IMPROVEMENT TESTS REVISION REVISION				Delhi(1998).	
Feb.10 - 17, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 A 3 Electronic analog computation - solution of the classes taught on the classes ta					
Computation – solution of simultaneous equations – differential equation Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 – Mar 07, 2017 (Day Order 1 to 6) Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 Mar. 08 - 24, 2017 Computation – solution of simultaneous equations – differential equation Lecture Malvino Albert Paul and Leach Donald, Digital Principles and Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi, (1981). Lecture Malvino Albert Paul and Leach Donald, Digital Principles and Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi, (1981). Peb.28 – Mar 07, 2017 (Day Order 1 to 6) S.1.D/A converter parallel A/D conversion by counter method – by count					
solution of simultaneous equations – differential equation Feb.20 - 27, 2017 (Day Order 1 to 6) Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 March 24, 2017 VINIT V D/A and A/D converter 5.1. Weighted resistor D/A converter parallel A/D conversion by counter method – by counter method – solving C.A. IMPROVEMENT TESTS REVISION	Feb.10 - 17, 2017		Lecture		
Feb. 20 - 27, 2017 (Day Order 1 to 6) Feb. 28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 Lecture Malvino Albert Paul and Leach Donald, Digital Principles and Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi.(1981). C.A. IMPROVEMENT TESTS REVISION REVISION	(Day Order 1 to 6)				the classes taught
equations - differential equation Converter Converter S.1. Weighted resistor D/A converter C	(Day Order 1 to 0)	solution of			
Carrent Carr		simultaneous			
Feb.20 - 27, 2017 (Day Order 1 to 6) Poly A and A/D converter 5.1. Weighted resistor D/A converter D/A converter - R - 2R ladder Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 March 24, 2017 Lecture Malvino Albert Paul and Leach Donald, Digital Principles and Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi,(1981). C.A. IMPROVEMENT TESTS Questioning on the classes taught Questioning on the classes taught REVISION		equations –			
CDay Order 1 to 6 D/A and A/D converter S.1. Weighted resistor D/A converter S.1. Weighted resistor D/A converter R - 2R ladder S.1. D/A converter Radder S.1. D/A converter S.1. D/A converter Radder S.1. D/A converter Depth Dept		differential equation			
Converter 5.1. Weighted resistor D/A converter - R - 2R ladder Feb.28 - Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 March 24, 2017 Donald, Digital Principles and Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi,(1981). Lecture C.A. IMPROVEMENT TESTS Lecture and problem solving REVISION REVISION	Feb.20 - 27, 2017	UNIT V	Lecture	Malvino Albert	
Converter 5.1. Weighted resistor D/A converter – R – 2R ladder 5.1. Weighted resistor D/A converter – R – 2R ladder 5.1. Weighted resistor D/A converter – R – 2R ladder 5.1. D/A converter parallel A/D converter Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 5.2. A/D conversion by counter method – C.A. IMPROVEMENT TESTS Questioning on the classes taught Questioning on the classes taught REVISION REVISION	(Dass Ondan 1 to C)	D/A and A/D		Paul and Leach	
resistor D/A converter – R – 2R ladder Feb.28 – Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 March 24, 2017 Applications, Tata McGraw Hill Pub. Co. Ltd., New Delhi,(1981). Component C.A. IMPROVEMENT TESTS C.A. IMPROVEMENT TESTS Questioning on the classes taught Questioning on the classes taught REVISION	(Day Order 1 to 6)	converter		Donald, Digital	
converter – R – 2R ladder Feb.28 – Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 Converter Solution Lecture Component C.A. IMPROVEMENT TESTS Lecture and problem solving REVISION REVISION		5.1. Weighted		Principles and	
ladder Hill Pub. Co. Ltd., New Delhi,(1981). Feb.28 - Mar 07, 2017 (Day Order 1 to 6) 5.1.D/A converter parallel A/D converter Lecture Quiz -III Component		resistor D/A		Applications,	
Ltd., New Delhi, (1981). Feb.28 - Mar 07, 2017 (Day Order 1 to 6) S.1.D/A converter parallel A/D converter Day Order 1 to 6) Component C.A. IMPROVEMENT TESTS Mar. 06 - 16, 2017 S.2 A/D conversion (Day Order 1 to 6) S.2.A/D conversion using voltage to frequency converter S.2.A/D conversion (Day Order 1) S.2.A/D conversion using voltage to frequency converter REVISION Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 S.1.D/A converter Lecture and problem solving C.A. IMPROVEMENT TESTS Can improve MENT TESTS Questioning on the classes taught Component C.A. IMPROVEMENT TESTS Can improve MENT TESTS Questioning on the classes taught Component C.A. IMPROVEMENT TESTS Can improve MENT TESTS Questioning on the classes taught Component C.A. IMPROVEMENT TESTS Can improve MENT TESTS Questioning on the classes taught Component C.A. IMPROVEMENT TESTS Parallel A/D C.A. IMPROVEMENT TESTS Parallel A/D Component C.A. IMPROVEMENT TESTS Parallel A/D Parall		converter - R - 2R		Tata McGraw	
Feb.28 – Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 Tebb.28 – Mar 07, 2017 S.1.D/A converter parallel A/D converter C.A. IMPROVEMENT TESTS C.A. IMPROVEMENT TESTS Questioning on the classes taught solving REVISION		ladder		Hill Pub. Co.	
Feb.28 – Mar 07, 2017 (Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 5.1.D/A converter parallel A/D converter C.A. IMPROVEMENT TESTS Lecture and problem solving Questioning on the classes taught REVISION REVISION				Ltd., New	
(Day Order 1 to 6) Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 (Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 C.A. IMPROVEMENT TESTS Lecture and problem solving Questioning on the classes taught REVISION REVISION				Delhi,(1981).	
Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 (Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 C.A. IMPROVEMENT TESTS Questioning on the classes taught Questioning on the classes taught REVISION	Feb.28 – Mar 07, 2017	5.1.D/A converter	Lecture		Quiz -III
Mar. 06 - 16, 2017 Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 Mar. 16, 2017 C.A. IMPROVEMENT TESTS Lecture and problem solving Mar. 16, 2017 S.2. A/D conversion using voltage to frequency converter (Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017	(D. O. 1. 14. C)	parallel A/D			Component
Mar. 08 - 15, 2017 (Day Order 1 to 6) Mar. 16, 2017 (Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 5.2 A/D conversion by counter method — solving Lecture and problem solving S.2.A/D conversion using voltage to frequency converter REVISION	(Day Order 1 to 6)	converter			
(Day Order 1 to 6) Mar. 16, 2017 (Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 by counter method — problem solving 5.2.A/D conversion using voltage to frequency converter REVISION	Mar. 06 - 16, 2017		C.A. IMPROVE	EMENT TESTS	
(Day Order 1 to 6) Mar. 16, 2017 (Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 by counter method — problem solving 5.2.A/D conversion using voltage to frequency converter REVISION	Mar. 08 - 15, 2017	5.2 A/D conversion	Lecture and		Ouestioning on
(Day Order 1 to 6) Mar. 16, 2017 5.2.A/D conversion using voltage to frequency converter (Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017	·	by counter method –	problem		the classes taught
Mar. 16, 2017 (Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 5.2.A/D conversion using voltage to frequency converter REVISION	(Day Order 1 to 6)		*		
(Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017	Mar. 16, 2017	5.2.A/D conversion	Č		
(Day Order 1) frequency converter REVISION (Day Order 2 to 6) March 24, 2017					
(Day Order 1) Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 REVISION					
(Day Order 2 to 6) March 24, 2017	(Day Order 1)	1 3			
March 24, 2017	Mar. 17 - 23, 2017		REVI	SION	1
	(Day Order 2 to 6)				
(Day Order 1)	March 24, 2017				
	(Day Order 1)				

Course Schedule – November 2016 – April 2017

Department : PHYSICS

Name/s of the Faculty :Dr. Belina Xavier

Course Title :Home Electrical Installations

Course Code : 11PH/GE/HE44

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Nov. 14 - 19, 2016 (Day Order 1 to 6)	General introduction to electricity UNIT 1: Basic electric circuits 1.1 Basic facts : electric circuits –basic components used in an Electric circuit – complete circuit	Lecture cum Demonstration	Lindslaey Trevor, Basic Electrical Installation Work	
Nov. 21 - 28, 2016 (Day Order 1 to 6)	1.2 Switches – types of switches – basic working of switches-plugs and its types	Lecture	Lindslaey Trevor, Basic Electrical Installation Work,	Questioning on classes taught
Nov. 29 – Dec 5, 2016 (Day Order 1 to 6)	1.2. safety practices and measurements.1.3. Principles of single phase and three phase connections.	lecture	Brijlal and subramanyam, Electricity and Magnetism	Quiz – III Component
Dec 6 - 14, 2016 (Day Order 1 to 6)	UNIT 2:Electrical connections 2.1Wires and its types- Hot wires – nichrome- fuses-fuse wire UNIT 4 4.2. Wiring practices of switches and plugs.	lecture	Lindslaey Trevor, Basic Electrical Installation Work	
Dec. 15 - 21, 2016 (Day Order 1 to 6)	2.1Melting point – causes and repairing a fuse – lighting circuits	lecture		Questioning on classes taught

Jan. 03- 09, 2017 (Day Order 1 to 6)	2.1 series and parallel circuits – house lights 4.1. Experiments on closed, open, short, series and parallel circuits.	lecture, problem solving	Brijlal and subramanyam, Electricity and Magnetism	
Jan. 10- 17, 2017 (Day Order 1 to 6)	2.1.ring circuit – the earth wire – lightning conductor	lecture	Lindslaey Trevor, Basic Electrical Installation Work	Test- III Component
Jan. 18- 20, 2017 (Day Order 1 to 3)	2.2 Using and paying for electricity-consumption- KWH-meters.	lecture		
Jan.23 - 28, 2017		C.A. Test	S	
Jan.30 – Feb 01, 2017 (Day Order 4 to 6)	Problems on Electricity consumption 4.3. Measurement of current and voltage using multimeter.	lecture		Questioning on classes taught
Feb.02 - 09, 2017 (Day Order 1 to 6)	UNIT 3: Home appliances 3.1 Wet grinder – mixer – refrigerator 5.1. Replacing fuses	lecture	Lindslaey Trevor, Basic Electrical Installation Work	
Feb.10 - 17, 2017 (Day Order 1 to 6)	3.1.Electric iron- heater-Microwave	lecture	Lindslaey Trevor, Basic Electrical	
Feb.20 - 27, 2017 (Day Order 1 to 6)	3.2 Emergency light – incandescent and fluorescent lamps-fittings-chokes-	lecture	Lindslaey Trevor, Basic Electrical Installation Work,	Seminar –III Component
Feb.28 – Mar 07, 2017 (Day Order 1 to 6)	3.2.CFL-starter- inverter 5.2. Model of house wiring	lecture	Lindslaey Trevor, Basic Electrical Installation Work,	
Mar. 06 - 16, 2017		C.A. IMPROVEME	NT TESTS	
Mar. 08 - 15, 2017 (Day Order 1 to 6)	3.3 Motor pump(horse power)- jet pump-electric fan- regulator (SCR)- control rheostat 5.3 Tubelight connection	lecture	Lindslaey Trevor, Basic Electrical Installation Work,	Questioning on classes taught

Mar. 16, 2017 (Day Order 1)	3.3.rice cooker(thermostat)-voltage stabilizer.	lecture	Lindslaey Trevor, Basic Electrical Installation Work,
Mar. 17 - 23, 2017			
(Day Order 2 to 6)		REVISIO	N
March 24, 2017			
(Day Order 1)			

Course Schedule – November 2016 – April 2017

Department : Physics

Name/s of the Faculty :Sr. Franscisco Nirmala FMM

Course Title : Quantum Mechanics and Relativity

Course Code : 11PH/MC/QR64

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Nov. 14 - 19, 2016 (Day Order 1 to 6)	Unit 1 Wave like properties of particles: Matter waves- de Broglie postulates- de Broglie wavelength. Davisson and Germer experiment Wave – particle duality	Lecture and video clippings	Gupta S.L., V.Kumar H V Sharma , R C Sharma , Quantum Mechanics,	Questioning on the lecture delivered and group interaction.
Nov. 21 - 28, 2016 (Day Order 1 to 6)	Unit 1 Complementarity principle- Einstein's interpretation of duality for radiation:	Lecture with PPT and problem solving	Gupta S.L., V.Kumar H V Sharma , R C Sharma , Quantum Mechanics	Questioning on the lecture delivered and group presentation
Nov. 29 – Dec 5, 2016 (Day Order 1 to 6)	Born's interpretation of duality for matter- wave functions- superposition principles	Lecture and video clipping	Eisberg Robert, Robert Resnick, Quantum Physics	Quiz (III component)
Dec 6 - 14, 2016 (Day Order 1 to 6)	Properties of matter waves- relation between wave, group and particle velocities.	Lecture with PPT	Eisberg Robert, Robert Resnick, Quantum Physics.	Questioning on the lecture delivered
Dec. 15 - 21, 2016 (Day Order 1 to 6)	Unit 2: Schrödinger's theory of quantum mechanics and applications 2.1 Role of Schrödinger's theory-limitation of de Broglie hypothesis.	Lecture	Eisberg Robert, Robert Resnick, Quantum Physics. Resnick Robert, Introduction to the Special Theory of Relativity	Questioning on the lecture delivered
Jan. 03- 09, 2017 (Day Order 1 to 6)	Unit 2 Need for differential equation. Time independent Schrödinger's equation- time dependent Schrödinger's equation.	Lecture with Power point presentation	Eisberg Robert, Robert Resnick, Quantum Physics.	Quiz
Jan. 10- 17, 2017 (Day Order 1 to 6)	Unit 2 Application to one dimensional problems:	Lecture with video	Gupta S.L., V.Kumar H V Sharma, R C	Questioning on the

	particle in a one dimensional box the step potential Rectangular potential barrier- examples of barrier penetration by particles- linear harmonic oscillator.	clipping	Sharma , Quantum Mechanics	lecture delivered
Jan. 18- 20, 2017 (Day Order 1 to 3)	Application to three dimensional problems: the free particle- particle in a three dimensional box-degeneracy Unit 3 Quantum mechanical operators 3.1 Definition of an operator- operator algebra eigen values and eigen functions	Lecture	Gupta S.L., V.Kumar H V Sharma , R C Sharma , Quantum Mechanics	Quiz
Jan.23 - 28, 2017		C.A. Test	ts .	
Jan.30 – Feb 01, 2017 (Day Order 4 to 6)	Hamiltonian operators- commutation relations between the components of orbital angular momentum	Lecture	Gupta S.L., V.Kumar H V Sharma, R C Sharma, Quantum Mechanics	Group discussion and interaction
Feb.02 - 09, 2017 (Day Order 1 to 6)	Commutation relation between momentum and free particle Hamiltonian operators Linear operators- Hermitian operators- properties- parity operators- properties- commutation relation between parity and symmetric	Lecture with Power point presentation, problem solving	Gupta S.L., V.Kumar H V Sharma , R C Sharma , Quantum Mechanics	Quiz- III component
Feb.10 - 17, 2017 (Day Order 1 to 6)	Unit- 4 The experimental background of the theory of relativity- Galilean transformations- Newtonian relativity- attempts to locate the absolute frame-Michelson-Morley experiment- explanation of negative results- postulates of special theory of relativity	Lecture and problem solving	Prakash Sathya, Relativistic Mechanics Resnick Robert, Introduction to the Special Theory of Relativity	Questioning in the lecture delivered
Feb.20 - 27, 2017 (Day Order 1 to 6)	Relativistic kinematics- Lorentz transformation		Resnick Robert, Introduction to	Group discussion

	equation (derivation) – consequence of Lorentz transformation equation (i) length contraction (ii) time dilation	Lecture	the Special Theory of Relativity Prakash Sathya, Relativistic Mechanics	
Feb.28 – Mar 07, 2017 (Day Order 1 to 6)	relativity and simultaneity – order of events-experimental verification of length contraction and time dilation concepts- meson paradox- twin paradox.	Lecture	Resnick Robert, Introduction to the Special Theory of Relativity. Prakash Sathya, Relativistic Mechanics	Questioning on the lecture delivered
Mar. 06 - 16, 2017	C.A. IMPROVEMENT TESTS			
Mar. 08 - 15, 2017 (Day Order 1 to 6)	Unit -5 Relativistic mechanics- proper time and proper velocity- relativistic energy and momentum- Mass - energy equivalence- evidence in support of mass.	Lecture and problem solving	Resnick Robert, Introduction to the Special Theory of Relativity Prakash Sathya, Relativistic Mechanics	Questioning on the lecture delivered
Mar. 16, 2017 (Day Order 1)	Energy relation between momentum and energy	Lecture and problem solving	Prakash Sathya, Relativistic Mechanics	Group discussion and interaction
Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 (Day Order 1)		REVISIO)N	

Course Schedule – November 2016 – April 2017

Department : PHYSICS

Name/s of the Faculty :Dr. Belina Xavier

Course Title :Nanoscience

Course Code : 11PH/ME/NS63

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Nov. 14 - 19, 2016 (Day Order 1 to 6)	Introduction to nanoscience	Lecture	B. Viswanathan, Nano Materials	Quiz
	Introduction- nano and nature- background to nanotechnology- nanoscale – time and length scale in structures.			
Nov. 21 - 28, 2016 (Day Order 1 to 6)	Evolution of band structures and Fermi surfaces- electronic structure of nanocrystals.	Power point Presentation	B. Viswanathan, Nano Materials	Questioning on classes taught
Nov. 29 – Dec 5, 2016 (Day Order 1 to 6)	Bulk to nano transition-size and shapes- dimensionality and size dependent phenomena.	Power point Presentation	B. Viswanathan, Nano Materials	Questioning on classes taught
Dec 6 - 14, 2016 (Day Order 1 to 6)	Nano particles and its properties Metal nanoparticles: Size control of metal nanoparticles, structural, surface, electronic and optical properties.	Power point Presentation	CharlesP.Poole,Jr.,Fr ank J. Owens, Introduction to Nanotechnology	Questioning on classes taught

Dec. 15 - 21, 2016 (Day Order 1 to 6)	Semiconductor nanoparticles: Solid state phase transformation, excitons, quantum confinement effect, semiconductor quantum dots, correlation of properties with size.	Power point Presentation	CharlesP.Poole,Jr.,Fr ank J. Owens, Introduction to Nanotechnology	Questioning on classes taught	
Jan. 03- 09, 2017 (Day Order 1 to 6)	Carbon nanostructures: Introduction- Fullerenes- C60- CNT- mechanical and optical properties.	Lecture	CharlesP.Poole,Jr.,Fr ank J. Owens, Introduction to Nanotechnology	Questioning on classes taught	
Jan. 10- 17, 2017 (Day Order 1 to 6)	Synthesis of nanomaterials Chemical and coprecipitation-solgel synthesis of metal oxides solvothermal-microwave heating synthesis.	Lecture cum Demonstration	CharlesP.Poole,Jr.,Fr ank J. Owens, Introduction to Nanotechnology	Test - III Component	
Jan. 18- 20, 2017 (Day Order 1 to 3)	Sonochemical- electrochemical synthesis – photochemical synthesis	Lecture cum Demonstration	CharlesP.Poole,Jr.,Fr ank J. Owens, Introduction to Nanotechnology		
Jan.23 - 28, 2017	C.A. Tests				
Jan.30 – Feb 01, 2017 (Day Order 4 to 6)	Characterisation techniques Powder X-ray diffraction	Power point Presentation	CharlesP.Poole,Jr.,Fr ank J. Owens, Introduction to Nanotechnology		
Feb.02 - 09, 2017 (Day Order 1 to 6)	Scanning electron microscope(SEM)	Power point Presentation	CharlesP.Poole,Jr.,Fr ank J. Owens,		

Feb.10 - 17, 2017 (Day Order 1 to 6)	- Transmission electron microscope (TEM). UV-vis absorption spectroscopy- Photo	Power point Presentation	Introduction to Nanotechnology CharlesP.Poole,Jr.,Fr ank J. Owens, Introduction to Nanotechnology	
Feb.20 - 27, 2017 (Day Order 1 to 6)	luminescence. Applications of nanomaterials	Lecture	John D. Miller, A Hand Book on Nanophysics	Seminar – III Component
	Nanosensors: Electro chemical sensors and bio- sensors.		runophysics	
Feb.28 – Mar 07, 2017 (Day Order 1 to 6)	Energy: solar cells-LED's-photovoltaic device applications.	Lecture	John D. Miller, A Hand Book on Nanophysics	Seminar
Mar. 06 - 16, 2017		C.A. IMPRO	VEMENT TESTS	
Mar. 08 - 15, 2017 (Day Order 1 to 6)	Medical: Imaging of cancer cells - targeted nanodrug delivery system.	Lecture	John D. Miller, A Hand Book on Nanophysics	Seminar
Mar. 16, 2017 (Day Order 1)	Carbon nanotubes: Field emission –fuel cells – display devices.	Lecture	John D. Miller, A Hand Book on Nanophysics	Seminar
Mar. 17 - 23, 2017 (Day Order 2 to 6) March 24, 2017 (Day Order 1)		RE	VISION	1