

Lesson Plan

Name of Faculty: Madhu
 Discipline: Applied Science
 Semester: 2nd
 Subject: Chemistry-II
 Lesson Plan Duration: 15 weeks

Work load (Lecture /Practical) per week (in hours): Lectures—03, Practical—02

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1 st	1	Metallurgy: - General metallurgical terms and operations.	1	Introduction & Familiarization with Lab Apparatus.
	2	General metallurgical terms and operations.		
	3	General metallurgical terms and operations with reference to iron		
2 nd	4	General metallurgical terms and operations with reference to copper. Hand Written Assignment: - List of iron, aluminium and copper metal ores and place of occurrence to aluminium.	2	Gravimetric analysis and apparatus used in gravimetric analysis
	5	General metallurgical terms and operations with reference to aluminium		
	6	Manufacturer of Steel: - Open hearth process, Hand Written Assignment: - Names of steel plants situated in India.		
3 rd	7	Alloys: - definition and purpose of alloying.	3	Determination of percentage purity of commercial sample of blue vitriol using N/20 Na ₂ S ₂ O ₃ .
	8	Types of alloys ferrous and nonferrous alloys, properties and applications of ferrous alloys-invar, nichrome, stainless steel, alnico		
	9	Properties and applications of non-ferrous alloys-brass, bronze, duralumin, magnalium and solder		
4 th	10	Test	4	File Checking & Viva Voce
	11	Corrosion and its control: Definition of corrosion, its types		
	12	Factors affecting corrosion rate, Theories of corrosion: Dry (Chemical) corrosion-Pilling Bedworth rule.		
5 th	13	Theories of corrosion: Wet corrosion in acidic atmosphere by hydrogen evolution mechanism.	5	Gravimetric estimation of moisture in the given coal sample (proximate analysis)
	14	Definition of passivity in metals as per galvanic series		
	15	Corrosion control: a) Metal coatings – Cathodic protection (Sacrificial protection and impressed current voltage), Cementation on Base Metal Steel – Application of Metal Zn (Sheradizing), Cr (Chromozing) and Al (Calorizing)		

6 th	16	Inorganic coatings – Anodizing and phosphating, c) Organic coatings - use of paints varnishes and enamels	6	Determination of percentage composition of volatile/non-volatile matter in the given coal sample
	17	Internal corrosion preventive measures- alloying (with reference to passivating, neutralizing and inhibition) and heat treatment (quenching, annealing)		
	18	Test		
7 th	19	Definition of fuel, classification of fuels, characteristics of good fuel	7	File Checking & Viva Voce
	20	Relative merits of gaseous, liquid and solid fuels 3.2 Calorific value-higher calorific value, lower calorific value		
	21	Determination of calorific value of solid or liquid fuel using Bomb calorimeter and numerical examples		
8 th	22	Coal - types of coal and proximate analysis of coal	8	Gravimetric estimation of ash content in the given coal sample (proximate analysis)
	23	Fuel rating – Octane number and Cetane number, fuel-structural influence on Octane and Cetane numbers		
	24	Gaseous fuels – chemical composition, calorific value and applications of natural gas (CNG), LPG		
9 th	25	Producer gas, water gas and biogas	9	Determination of viscosity of given liquid using Redwood viscometers
	26	Elementary ideal on – hydrogen as future fuels, nuclear fuels		
	27	Assignment & Test		
10 th	28	Definition of Lubricant and lubrication	10	File Checking & Viva Voce
	29	Type of lubrications –hydrodynamic, boundary lubrication with illustrative diagrams		
	30	Classification of lubricants –liquid lubricants, solid lubricants, semi-solid lubricants and synthetic lubricants with examples		
11 th	31	Properties of lubricant a. Physical properties –viscosity and viscosity index, cloud point and pour point, flash point and fire point, oiliness.	11	Determination of flash point of given lubricating oil using Able’s flash point apparatus
	32	Chemical properties- total acid value or number (TAV or TAN), carbon residue, emulsification factor and iodine value		
	33	Designation of lubricating oils according to Society of Automotive Engineers (SAE)		

12 th	34	Cutting fluids – applications of cutting fluids, types and the factors that govern the selection of cutting fluids	12	To study the effect of metal coupling on corrosion of iron
	35	Test		
	36	Engineering Materials and Refractories :-Definition and types with suitable examples and applications of- Ceramics		
13 th	37	Refractory and Composite materials	13	Detection of iron metal in the given solution of rust (solution of rust in HCl be provided)
	38	Glass-chemical composition and application of Soda, Borosilicate and lead glasses only		
	39	Paint, varnish and enamels- definition, constituents and advantages of these organic coatings		
14 th	40	Polymers and Plastics: - Definition of polymer, monomer and degree of polymerization	14	File Checking & Viva Voce
	41	Introduction to addition and condensation polymers with suitable examples (PE, PS, PVC, Teflon)		
	42	Introduction to addition and condensation polymers with suitable examples (Nylon -66 and Bakelite)		
15 th	43	Definition of plastics, thermo plastics and thermo setting plastics with suitable examples, distinctions between thermo plastics and thermo settings.	15	Revision of All Experiment.
	44	Applications of polymers in industry and daily life		
	45	Test		

Lesson Plan

Name of Faculty: Yet To Be Assigned

Discipline: Applied Science

Semester: 2nd

Subject: Chemistry-II

Lesson Plan Duration: 15 weeks

Work load (Lecture /Practical) per week (in hours): Lectures—03, Practical—02

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1 st	1	Metallurgy: - General metallurgical terms and operations.	1	Introduction & Familiarization with Lab Apparatus.
	2	General metallurgical terms and operations.		
	3	General metallurgical terms and operations with reference to iron		
2 nd	4	General metallurgical terms and operations with reference to copper. Hand Written Assignment: - List of iron, aluminium and copper metal ores and place of occurrence to aluminium.	2	Gravimetric analysis and apparatus used in gravimetric analysis
	5	General metallurgical terms and operations with reference to aluminium		
	6	Manufacturer of Steel: - Open hearth process, Hand Written Assignment: - Names of steel plants situated in India.		
3 rd	7	Alloys: - definition and purpose of alloying.	3	Determination of percentage purity of commercial sample of blue vitriol using N/20 Na ₂ S ₂ O ₃ .
	8	Types of alloys ferrous and nonferrous alloys, properties and applications of ferrous alloys-invar, nichrome, stainless steel, alnico		
	9	Properties and applications of non-ferrous alloys-brass, bronze, duralumin, magnalium and solder		
4 th	10	Test	4	File Checking & Viva Voce
	11	Corrosion and its control: Definition of corrosion, its types		
	12	Factors affecting corrosion rate, Theories of corrosion: Dry (Chemical) corrosion-Pilling Bedworth rule.		
5 th	13	Theories of corrosion: Wet corrosion in acidic atmosphere by hydrogen evolution mechanism.	5	Gravimetric estimation of moisture in the given coal sample (proximate analysis)
	14	Definition of passivity in metals as per galvanic series		
	15	Corrosion control: a) Metal coatings – Cathodic protection (Sacrificial protection and impressed current voltage), Cementation on Base Metal Steel – Application of Metal Zn (Sheradizing), Cr (Chromozing) and Al (Calorizing)		

6 th	16	Inorganic coatings – Anodizing and phosphating, c) Organic coatings - use of paints varnishes and enamels	6	Determination of percentage composition of volatile/non-volatile matter in the given coal sample
	17	Internal corrosion preventive measures- alloying (with reference to passivating, neutralizing and inhibition) and heat treatment (quenching, annealing)		
	18	Test		
7 th	19	Definition of fuel, classification of fuels, characteristics of good fuel	7	File Checking & Viva Voce
	20	Relative merits of gaseous, liquid and solid fuels 3.2 Calorific value-higher calorific value, lower calorific value		
	21	Determination of calorific value of solid or liquid fuel using Bomb calorimeter and numerical examples		
8 th	22	Coal - types of coal and proximate analysis of coal	8	Gravimetric estimation of ash content in the given coal sample (proximate analysis)
	23	Fuel rating – Octane number and Cetane number, fuel-structural influence on Octane and Cetane numbers		
	24	Gaseous fuels – chemical composition, calorific value and applications of natural gas (CNG), LPG		
9 th	25	Producer gas, water gas and biogas	9	Determination of viscosity of given liquid using Redwood viscometers
	26	Elementary ideal on – hydrogen as future fuels, nuclear fuels		
	27	Assignment & Test		
10 th	28	Definition of Lubricant and lubrication	10	File Checking & Viva Voce
	29	Type of lubrications –hydrodynamic, boundary lubrication with illustrative diagrams		
	30	Classification of lubricants –liquid lubricants, solid lubricants, semi-solid lubricants and synthetic lubricants with examples		
11 th	31	Properties of lubricant a. Physical properties –viscosity and viscosity index, cloud point and pour point, flash point and fire point, oiliness.	11	Determination of flash point of given lubricating oil using Able’s flash point apparatus
	32	Chemical properties- total acid value or number (TAV or TAN), carbon residue, emulsification factor and iodine value		
	33	Designation of lubricating oils according to Society of Automotive Engineers (SAE)		
12 th	34	Cutting fluids – applications of cutting fluids, types and the	12	To study the effect of

		factors that govern the selection of cutting fluids		metal coupling on corrosion of iron
	35	Test		
	36	Engineering Materials and Refractories :-Definition and types with suitable examples and applications of- Ceramics		
13 th	37	Refractory and Composite materials	13	Detection of iron metal in the given solution of rust (solution of rust in HCl be provided)
	38	Glass-chemical composition and application of Soda, Borosilicate and lead glasses only		
	39	Paint, varnish and enamels- definition, constituents and advantages of these organic coatings		
14 th	40	Polymers and Plastics: - Definition of polymer, monomer and degree of polymerization	14	File Checking & Viva Voce
	41	Introduction to addition and condensation polymers with suitable examples (PE, PS, PVC, Teflon)		
	42	Introduction to addition and condensation polymers with suitable examples (Nylon -66 and Bakelite)		
15 th	43	Definition of plastics, thermo plastics and thermo setting plastics with suitable examples, distinctions between thermo plastics and thermo settings.	15	Revision of All Experiment.
	44	Applications of polymers in industry and daily life		
	45	Test		

Lesson Plan

Name of Faculty: Smt. Promila
 Discipline: Applied Science
 Semester: 2nd
 Subject: Applied Mathematics
 Lesson Plan Duration : 15 Weeks
 Work load (Theory): 5 hours/Week

Week	Lect. Day	Theory Topic/ Assignment/ Test
1 st	1	Concept of limits
	2	1 st standard limit
	3	2 nd standard limit
	4	3 rd standard limit
	5	4 th standard limit
2 nd	6	Differentiation of x^n, e^x
	7	Differentiation of $\sin x, \tan x, \cos x$
	8	Differentiation of sum
	9	Differentiation of sum
	10	Differentiation of sum
3 rd	11	Differentiation of product
	12	Differentiation of product
	13	Differentiation of product
	14	Differentiation of quotient
	15	Differentiation of quotient
4 th	16	Differentiation of quotient
	17	Assignment of 1.1, 1.2, 1.3
	18	Value added lecturer.
	19	Assignment evaluation
	20	Assignment evaluation
5 th	21	Problem solving session & test
	22	Analysis of test
	23	Solution of Test Question Paper
	24	Differentiation of trigonometric functions
	25	Differentiation of trigonometric functions
6 th	26	Differentiation of trigonometric functions
	27	Differentiation of inverse trigonometric functions
	28	Differentiation of inverse trigonometric functions
	29	Differentiation of logarithmic function.
	30	Differentiation of logarithmic function.
7 th	31	Differentiation of logarithmic function.
	32	Successive differentiation (upto 2 nd order)
	33	Successive differentiation (upto 2 nd order)
	34	Application of differentiation in Rate measures.
	35	Application of differentiation in Maxima and Minima

8 th	36	Application of differentiation in Maxima and Minima
	37	Integration as inverse operation of differentiation with simple example.
	38	Integration as inverse operation of differentiation with simple example
	39	Integration as inverse operation of differentiation with simple example
	40	Simple standard integral and related problems.
9 th	41	Simple standard integral and related problems.
	42	Simple standard integral and related problems.
	43	Evaluation of definite integrals with given limits
	44	Evaluation of definite integrals with given limits
	45	Evaluation of definite integrals with given limits
10 th	46	Assignment of 1.4, 1.5, 2.1, 2.2, 2.3
	47	Value added lecturer.
	48	Assignment evaluation
	49	Assignment evaluation
	50	Problem solving session & test
11 th	51	Analysis of test
	52	Solution of Test Question Paper
	53	Applications of integration: for evaluation of area under a curve and axes (Simple problems).
	54	Applications of integration: for evaluation of area under a curve and axes (Simple problems).
	55	Numerical integration by Trapezoidal Rule using pre-existing mathematical models.
12 th	56	Numerical integration by Simpson's Rule using pre-existing mathematical models.
	57	Numerical integration by Simpson's Rule using pre-existing mathematical models.
	58	Definition of Differential equation, order and degree
	59	Differential equation of linearity of an ordinary differential equation.
	60	Measures of Central Tendency: Mean,
13 th	61	Measures of Central Tendency: Median
	62	Measures of Central Tendency: Mode
	63	Measures of Dispersion: Mean deviation
	64	Measures of Dispersion: Mean deviation
	65	Measures of Dispersion: standard deviation.
14 th	66	Measures of Dispersion: standard deviation.
	67	Co-efficient of rank co-relation.
	68	Co-efficient of rank co-relation.
	69	Assignment of 2.4, 2.5, 3, 4
	70	Value added lecturer.
15 th	71	Assignment evaluation
	72	Assignment evaluation
	73	Problem solving session & test
	74	Analysis of test
	75	Solution of Test Question Paper

Lesson Plan

Name of Faculty: Yet To be assigned
 Discipline: Applied Science
 Semester: 2nd
 Subject: Applied Mathematics
 Lesson Plan Duration : 15 Weeks
 Work load (Theory): 5 hours/Week

Week	Lect. Day	Theory Topic/ Assignment/ Test
1 st	1	Concept of limits
	2	1 st standard limit
	3	2 nd standard limit
	4	3 rd standard limit
	5	4 th standard limit
2 nd	6	Differentiation of x^n, e^x
	7	Differentiation of $\sin x, \tan x, \cos x$
	8	Differentiation of sum
	9	Differentiation of sum
	10	Differentiation of sum
3 rd	11	Differentiation of product
	12	Differentiation of product
	13	Differentiation of product
	14	Differentiation of quotient
	15	Differentiation of quotient
4 th	16	Differentiation of quotient
	17	Assignment of 1.1, 1.2, 1.3
	18	Value added lecturer.
	19	Assignment evaluation
	20	Assignment evaluation
5 th	21	Problem solving session & test
	22	Analysis of test
	23	Solution of Test Question Paper
	24	Differentiation of trigonometric functions
	25	Differentiation of trigonometric functions
6 th	26	Differentiation of trigonometric functions
	27	Differentiation of inverse trigonometric functions
	28	Differentiation of inverse trigonometric functions
	29	Differentiation of logarithmic function.
	30	Differentiation of logarithmic function.
7 th	31	Differentiation of logarithmic function.
	32	Successive differentiation (upto 2 nd order)
	33	Successive differentiation (upto 2 nd order)
	34	Application of differentiation in Rate measures.
	35	Application of differentiation in Maxima and Minima

8 th	36	Application of differentiation in Maxima and Minima
	37	Integration as inverse operation of differentiation with simple example.
	38	Integration as inverse operation of differentiation with simple example
	39	Integration as inverse operation of differentiation with simple example
	40	Simple standard integral and related problems.
9 th	41	Simple standard integral and related problems.
	42	Simple standard integral and related problems.
	43	Evaluation of definite integrals with given limits
	44	Evaluation of definite integrals with given limits
	45	Evaluation of definite integrals with given limits
10 th	46	Assignment of 1.4, 1.5, 2.1, 2.2, 2.3
	47	Value added lecturer.
	48	Assignment evaluation
	49	Assignment evaluation
	50	Problem solving session & test
11 th	51	Analysis of test
	52	Solution of Test Question Paper
	53	Applications of integration: for evaluation of area under a curve and axes (Simple problems).
	54	Applications of integration: for evaluation of area under a curve and axes (Simple problems).
	55	Numerical integration by Trapezoidal Rule using pre-existing mathematical models.
12 th	56	Numerical integration by Simpson's Rule using pre-existing mathematical models.
	57	Numerical integration by Simpson's Rule using pre-existing mathematical models.
	58	Definition of Differential equation, order and degree
	59	Differential equation of linearity of an ordinary differential equation.
	60	Measures of Central Tendency: Mean,
13 th	61	Measures of Central Tendency: Median
	62	Measures of Central Tendency: Mode
	63	Measures of Dispersion: Mean deviation
	64	Measures of Dispersion: Mean deviation
	65	Measures of Dispersion: standard deviation.
14 th	66	Measures of Dispersion: standard deviation.
	67	Co-efficient of rank co-relation.
	68	Co-efficient of rank co-relation.
	69	Assignment of 2.4, 2.5, 3, 4
	70	Value added lecturer.
15 th	71	Assignment evaluation
	72	Assignment evaluation
	73	Problem solving session & test
	74	Analysis of test
	75	Solution of Test Question Paper

Name Of the Faculty: Reena

Discipline: Applied Science

Semester: IInd

Subject: English

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

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

Week	Theory		Practical	
	Lecture day	Topic (including assignment/ test)	Practical Day	Topic
1st	1st	Prepositions	1st	Debate
	2nd	Exercises of Prepositions	2nd	Debate
	3rd	Exercises of Prepositions		
2nd	4th	Framing Questions	3rd	Telephonic conversation
	5th	Exercises of Framing Questions	4th	Telephonic conversation
	6th	Exercises of Framing Questions		
3rd	7th	Conjunctions	5th	Offering-Responding to offers
	8th	Exercises of Conjunctions	6th	Offering-Responding to offers
	9th	Exercises of Conjunctions		
4th	10th	Tenses	7th	Requesting-Responding to requests
	11th	Exercises of Tenses	8th	Requesting-Responding to requests
	12th	Exercises of Tenses		
5th	13th	Test	9th	Congratulating
	14th	Unseen passage for comprehension	10th	Congratulating
	15th	Unseen passage for comprehension		
6th	16th	Passage for comprehension	11th	Exploring sympathy and condolences
	17th	Passage for comprehension	12th	Exploring sympathy and condolences
	18th	Test		
7th	19th	Business letters Floating quotations	13th	Asking questions polite responses
	20th	Practice of Floating quotations	14th	Asking questions polite responses
	21st	Placing orders		

Week	Theory		Practical	
	Lecture day	Topic (including assignment/	Practical Day	Topic
8th	22nd	Practice of Placing orders	15th	Apologizing forgiving
	23rd	Complaint letters	16th	Apologizing forgiving
	24th	Practice of complaint letters		
9th	25th	Official letters	17th	Complaining
	26th	Letters of Govt. and other offices	18th	Complaining
	27th	Practice of official letters		
10th	28th	Practice of Business letters	19th	Warning
	29th	Practice of official letters	20th	Warning
	30th	Practice of Floating quotations		
11th	31st	Practice of complaint letters	21th	Asking and giving information
	32nd	Test	22nd	Asking and giving information
	33rd	Memo writing		
12th	34th	Practice of Memo	23rd	Getting and giving permission
	35th	Circular writing	24th	Getting and giving permission
	36th	Practice of circulars		
13th	37th	Office order writing	25th	Asking for and giving opinions
	38th	Practice of office order	26th	Asking for and giving opinions
	39th	Test		
14th	40th	Agenda of meeting	27th	Class practical and viva
	41st	Practice of Agenda	28th	Class practical and viva
	42nd	Minutes of meeting		
15th	43rd	Practice of Minutes	29th	Class practical and viva
	44th	Test	30th	Class practical and viva
	45th	Discussion of Previous year Question paper		

Name Of the Faculty: Anjali Rani

Discipline: Applied Science

Semester: IInd

Subject: English

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

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

Week	Theory		Practical	
	Lecture day	Topic (including assignment/ test)	Practical Day	Topic
1st	1st	Prepositions	1st	Debate
	2nd	Exercises of Prepositions	2nd	Debate
	3rd	Exercises of Prepositions		
2nd	4th	Framing Questions	3rd	Telephonic conversation
	5th	Exercises of Framing Questions	4th	Telephonic conversation
	6th	Exercises of Framing Questions		
3rd	7th	Conjunctions	5th	Offering-Responding to offers
	8th	Exercises of Conjunctions	6th	Offering-Responding to offers
	9th	Exercises of Conjunctions		
4th	10th	Tenses	7th	Requesting-Responding to requests
	11th	Exercises of Tenses	8th	Requesting-Responding to requests
	12th	Exercises of Tenses		
5th	13th	Test	9th	Congratulating
	14th	Unseen passage for comprehension	10th	Congratulating
	15th	Unseen passage for comprehension		
6th	16th	Passage for comprehension	11th	Exploring sympathy and condolences
	17th	Passage for comprehension	12th	Exploring sympathy and condolences
	18th	Test		
7th	19th	Business letters Floating quotations	13th	Asking questions polite responses
	20th	Practice of Floating quotations	14th	Asking questions polite responses
	21st	Placing orders		

Week	Theory		Practical	
	Lecture day	Topic (including assignment/	Practical Day	Topic
8th	22nd	Practice of Placing orders	15th	Apologizing forgiving
	23rd	Complaint letters	16th	Apologizing forgiving
	24th	Practice of complaint letters		
9th	25th	Official letters	17th	Complaining
	26th	Letters of Govt. and other offices	18th	Complaining
	27th	Practice of official letters		
10th	28th	Practice of Business letters	19th	Warning
	29th	Practice of official letters	20th	Warning
	30th	Practice of Floating quotations		
11th	31st	Practice of complaint letters	21th	Asking and giving information
	32nd	Test	22nd	Asking and giving information
	33rd	Memo writing		
12th	34th	Practice of Memo	23rd	Getting and giving permission
	35th	Circular writing	24th	Getting and giving permission
	36th	Practice of circulars		
13th	37th	Office order writing	25th	Asking for and giving opinions
	38th	Practice of office order	26th	Asking for and giving opinions
	39th	Test		
14th	40th	Agenda of meeting	27th	Class practical and viva
	41st	Practice of Agenda	28th	Class practical and viva
	42nd	Minutes of meeting		
15th	43rd	Practice of Minutes	29th	Class practical and viva
	44th	Test	30th	Class practical and viva
	45th	Discussion of Previous year Question paper		

Name of the Faculty : Mrs. Sunil Rani (Theory, Practical)

Discipline : APPLIED SCIENCE

Semester : 2nd

Subject : APPLIED PHYSICS-II

Lesson plan Duration : 15 weeks(from January, 2018)

Workload per week in hours : Lectures-03, Practicals-02

Week	Theory		Practical	
	Lecture Day	Topic(including assignment test)	Practical Day	Topic
1 st	1	. Definition of wave with examples	1 st	To determine and verify the time period of cantilever.
	2	Types of wave motion, transverse and longitudinal wave motion with examples		
	3	Relation between velocity of wave, frequency and wave length of a wave ($v = n \lambda$). Simple harmonic motion: definition, expression for displacement, velocity, acceleration, time period, frequency in S.H.M.		
2 nd	4	Vibration of spring mass system, cantilever and determination of their time period. Free, forced and resonant vibrations with examples	2 nd	To determine time period of Simple Pendulum
	5	Acoustics of buildings-reverberation,		
	6	reverberation time, echo, noise, coefficient of absorption of sound, methods to control reverberation time		
3 rd	7	Ultrasonics-Methods of production (magnetostriction oscillator only)	3 rd	To verify ohm's law.
	8	their engineering applications to cold welding, drilling, cleaning and SONAR		
	9	Test		
4 th	10	Assignment	4 th	To verify law of resistance in series
	11	Lenses, reflection & refraction of light		
	12	refractive index, lens formula (no derivation), real and virtual image, magnification.		

5 th	13	Power of lens, microscope, telescope (definition only)	5 th	To verify law of resistances in parallel.
	14	Total internal reflection,		
	15	critical angle and conditions for total internal reflection.		
6 th	16	Coulomb's law, unit charge	6 th	To find resistance of galvanometer by half deflection method.
	17	Gauss's Law . Electric field intensity and electric potential (definition and units only)		
	18	Application of Gauss's Law to straight charged conductor, plane charged sheet		
7 th	19	Capacitance, capacitance of parallel plate capacitor, series and parallel combination of capacitors	7 th	To convert a galvanometer into an ammeter of given range.)
	20	Dielectric and its effect on capacitors, dielectric constant and dielectric breakdown		
	21	Problems		
8 th	22	Definition of electric current, resistance , potential & their units	8 th	To convert a galvanometer into a voltmeter of given range.
	23	Ohm's law		
	24	Specific resistance, series and parallel combination of resistances, effect of temperature on resistance.		
9 th	25	Kirchhoff's laws, Wheatstone bridge	9 th	To study and verify laws of reflection using mirrors.
	26	Heating effect of current and concept of electric power		
	27	Problems		
10 th	28	Assignment	10 th	To determine and verify the time period of cantilever
	29	Test		
	30	Types of materials (insulator, semi-conductor, conductor)		
11 th	31	intrinsic and extrinsic semi conductor, p-n junction diode and its characteristics	11 th	To determine time period of Simple Pendulum.
	32	Diode as rectifier-half wave and full wave rectifier		
	33	semi conductor transistor pnp and npn (introduction only)		
12 th	34	Lasers: concept of energy levels, ionizations and excitation potentials;	12 th	Problems
	35	spontaneous and stimulated emission; population inversion, Laser, types of lasers, ruby laser and applications of laser		
	36	Fiber optics: Introduction and applications		

13th	37	Super conductivity: Phenomenon of super conductivity	13th	Revision
	38	Type I and Type II super conductor and its applications		
	39	Type I and Type II super conductor and its applications		
14th	40	Revision	14th	Revision
	41	Revision		
	42	Revision		
15th	43	Problems	15th	Test
	44	Assignment		
	45	Test		

Name of the Faculty : Yet to be Assigned
Discipline : APPLIED SCIENCE
Semester : 2nd
Subject : APPLIED PHYSICS-II
Lesson plan Duration : 15 weeks(from January, 2018)
Workload per week in hours : Lectures-03, Practicals-02

Week	Theory		Practical	
	Lecture Day	Topic(including assignment test)	Practical Day	Topic
1 st	1	. Definition of wave with examples	1 st	To determine and verify the time period of cantilever.
	2	Types of wave motion, transverse and longitudinal wave motion with examples		
	3	Relation between velocity of wave, frequency and wave length of a wave ($v = n \lambda$). Simple harmonic motion: definition, expression for displacement, velocity, acceleration, time period, frequency in S.H.M.		
2 nd	4	Vibration of spring mass system, cantilever and determination of their time period. Free, forced and resonant vibrations with examples	2 nd	To determine time period of Simple Pendulum
	5	Acoustics of buildings-reverberation,		
	6	reverberation time, echo, noise, coefficient of absorption of sound, methods to control reverberation time		
3 rd	7	Ultrasonics-Methods of production (magnetostriction oscillator only)	3 rd	To verify ohm's law.
	8	their engineering applications to cold welding, drilling, cleaning and SONAR		
	9	Test		
4 th	10	Assignment	4 th	To verify law of resistance in series
	11	Lenses, reflection & refraction of light		
	12	refractive index, lens formula (no derivation), real and virtual image, magnification.		

5 th	13	Power of lens, microscope, telescope (definition only)	5 th	To verify law of resistances in parallel.
	14	Total internal reflection,		
	15	critical angle and conditions for total internal reflection.		
6 th	16	Coulomb's law, unit charge	6 th	To find resistance of galvanometer by half deflection method.
	17	Gauss's Law . Electric field intensity and electric potential (definition and units only)		
	18	Application of Gauss's Law to straight charged conductor, plane charged sheet		
7 th	19	Capacitance, capacitance of parallel plate capacitor, series and parallel combination of capacitors	7 th	To convert a galvanometer into an ammeter of given range.)
	20	Dielectric and its effect on capacitors, dielectric constant and dielectric breakdown		
	21	Problems		
8 th	22	Definition of electric current, resistance , potential & their units	8 th	To convert a galvanometer into a voltmeter of given range.
	23	Ohm's law		
	24	Specific resistance, series and parallel combination of resistances, effect of temperature on resistance.		
9 th	25	Kirchhoff's laws, Wheatstone bridge	9 th	To study and verify laws of reflection using mirrors.
	26	Heating effect of current and concept of electric power		
	27	Problems		
10 th	28	Assignment	10 th	To determine and verify the time period of cantilever
	29	Test		
	30	Types of materials (insulator, semi-conductor, conductor)		
11 th	31	intrinsic and extrinsic semi conductor, p-n junction diode and its characteristics	11 th	To determine time period of Simple Pendulum.
	32	Diode as rectifier-half wave and full wave rectifier		
	33	semi conductor transistor pnp and npn (introduction only)		
12 th	34	Lasers: concept of energy levels, ionizations and excitation potentials;	12 th	Problems
	35	spontaneous and stimulated emission; population inversion, Laser, types of lasers, ruby laser and applications of laser		
	36	Fiber optics: Introduction and applications		

13th	37	Super conductivity: Phenomenon of super conductivity	13th	Revision
	38	Type I and Type II super conductor and its applications		
	39	Type I and Type II super conductor and its applications		
14th	40	Revision	14th	Revision
	41	Revision		
	42	Revision		
15th	43	Problems	15th	Test
	44	Assignment		
	45	Test		