Government Polytechnic Panchkula, Sector

Lesson Plan

Name- Ms. Namrata

Discipline- Applied Science

Semester – 1st Sem

Subject –Applied

Duration –15 weeks (2023-24)

Work load (per week)-: lectures-04

Week	*Theory*			
	Lect. day	*Topic*		
1st	*1st*	***Unit-1*** *Complex Numbers: definition of complex number, real and imaginary parts of a complex number,*		
	2nd	*real and imaginary parts of a complex number,,*		
	3rd	*Polar and Cartesian Form and their inter conversion, Conjugate of a complex*		
	4th	*Logarithms and its basic properties*		
2nd	*1st*	*Logarithms and its basic properties*		
	2nd	***Revsion unit-1***		
	3rd	***Unit-2*** *Meaning of npr&ncr* *(mathematical expression*		
	4th	*Binomial theorem (without proof) for positive integral index*		
3rd	*1st*	*first binomial approximation with application to engineering problems.*		
	2nd	*Determinants and Matrices – Evaluation of determinants (upto 2ndorder), solution of equations (upto 2 unknowns) by Crammer's rule,*		
	3rd	*Determinants and Matrices – Evaluation of determinants (upto 2ndorder), solution of equations (upto 2 unknowns) by Crammer's rule,*		,
	4th	*Determinants and Matrices – Evaluation of determinants (upto 2ndorder), solution of*		

		equations (upto 2 unknowns) by Crammer's rule,		
3rd	*1st*	*definition of Matrices and its types, addition, subtraction and multiplication of matrices (upto 2nd order).*		
	2nd	*definition of Matrices and its types, addition, subtraction and multiplication of matrices (upto 2nd order).*		
	3rd	***Revision Unit- 2***		
	4th	***Revision Unit- 2***		
4th	*1st*	***Unit-3*** *Concept of angle, measurement of angle in degrees, grades, radians and their conversions.*		
	2nd	***Unit-3*** *Concept of angle, measurement of angle in degrees, grades, radians and their conversions.*		
	3rd	*T-Ratios of Allied angles (without proof), Sum, Difference formulae and their applications (without proof). Product formulae (Transformation of product to sum, difference and vice versa*		
	4th	*T-Ratios of Allied angles (without proof), Sum, Difference formulae and their applications (without proof). Product formulae (Transformation of product to sum, difference and vice versa*		
5th	*1st*	*Applications of Trigonometric terms in engineering problems such as to find an angle of elevation, height, distance etc.*		***UNIT V Geometry of Circle and Software Circle Introduction***
	2nd	*Applications of Trigonometric terms in engineering problems such as to find an angle of elevation, height, distance etc.*		*General equation of a circle and its characteristics. To find the equation of a circle, given:*
	3rd	***Revision Unit-3***		*Centre and radius*
	4th	***Revision Unit-3***		***T****hree points lying on it*
6th	*1st*	***UNIT IV Co-ordinate Geometry Introduction***		*Coordinates of end points of a diameter*
	2nd	*Cartesian and Polarco-ordinates (two dimensional), Distance between two points, mid-point, centroidof vertices*		***MATLAB Or SciLab software Introduction***

		of a triangle.		
	3rd	*Cartesian and Polar co-ordinates (two dimensional), Distance between two points, mid-point, centroid of vertices of a triangle.*		*Theoretical Introduction, MATLAB or Scilab as Simple Calculator*
	4th	*Slope of a line, equation of straight line in various standards forms (without proof);*		*(Addition and subtraction of values – Trigonometric and Inverse Trigonometric functions)*
7th	*1st*	*Slope of a line, equation of straight line in various standards forms (without proof);*		*General Practice*
	2nd	*(slope intercept form, intercept form, one-point form, two-point form, symmetric form,*		*Revision Unit-4*
	3rd	*form), intersection of two straight lines, concurrency of lines, angle between straight lines, parallel and perpendicular lines,*		*Revision Unit-4*
	4th	*perpendicular distance formula, conversion of general form of equation to the various forms.*		*Revision Unit-4*

8th	1st	***Revision- Unit-4***		
	2nd	***Revision- Unit-4***		
	3rd	***Revision- Unit-4***		
	4th	***Revision- Unit-4***		
9th	1st	***UNIT V***		
	2nd	***Geometry of Circle and Software*** ***Circle Introduction***		
	3rd	***UNIT V*** ***Geometry of Circle and Software*** ***Circle Introduction***		
	4th	***UNIT V*** ***Geometry of Circle and Software*** ***Circle Introduction***		
10th	1st	*General equation of a circle and its characteristics. To find the equation of a circle, given:*		
	2nd			
		General equation of a circle and its characteristics. To find the equation of a circle, given:		
	3rd	*Centre and radius*		
	4th	***T****hree points lying on it*		
11th	1st	*Coordinates of end points of a diameter*		
	2nd			
		Centre and radius		
	3rd	***T****hree points lying on it*		
	4th	*Coordinates of end points of a diameter*		

12th	*1st*	***MATLAB Or SciLab software Introduction***		
	2nd			
		MATLAB Or SciLab software Introduction		
	3rd	***MATLAB Or SciLab software Introduction***		
	4th	***MATLAB Or SciLab software Introduction***		
13th	*1st*	*Theoretical Introduction, MATLAB or Scilab as Simple Calculator*		
	2nd			
		Theoretical Introduction, MATLAB or Scilab as Simple Calculator		
	3rd	*(Addition and subtraction of values –Trigonometric and Inverse Trigonometric functions*		
	4th	*(Addition and subtraction of values –Trigonometric and Inverse Trigonometric functions*		
14th	*1st*	*Revision Unit-4*		
	2nd			
		Revision Unit-4		
	3rd	*Revision Unit-4*		
	4th	*Revision*		
15th	*1st*	*Revision*		
	2nd			
		Revision		
	3rd	*Revision*		

16th	4th	Revision		
	1st 2nd	Revision		
		Revision		
	3rd	Revision		
	4th	Revision		

Government Polytechnic Panchkula, Sector

Lesson Plan

Name-Mrs Sudesh Sharma
Mr. Abhimanyu
Discipline- Applied Science
Semester – 1st Sem
Subject –Applied Physics
Duration –15 weeks (2023-24)

Work load (per week):- lectures-02, and practicals-02

Week	*Theory*		*Practical*	
	Lect. day	*Topic*	*Practical day*	*Topic*
1st	*1st*	*Definition of Physics, physical quantities-fundamental and derived*	*1st*	*Familiarization of measurement instruments and their parts (for example - vernier calliper, screw gauge, spherometer, travelling microscope etc.), andtaking a reading. (compulsory to all students)*
	2nd	*Units: fundamental and derived*		
2nd	*1st*	*System of units: CGS, FPS, MKS,SI*	*1st*	*To find diameter of solidcylinder using a vernier calliper*
	2nd	*Dimension, dimensional formulae and SI units of physical quantities-distance,* *displacement, area, volume, density, velocity, acceleration, linearmomentum, force,* *impulse, work, power, energy, pressure, surface tension, stress,strain)*		
3rd	*1st*	*Dimensional equations, principle of homogeneity of dimensional equation*	*1st*	*To find internal diameter and depth of a beaker using a verniercalliper and hence find its volume.*
	2nd	*Application of dimensional analysis: checking the correctness of physical equation,* *conversion of system of unit(force, work, acceleration)*		

4th	*1st*	*UNIT II* *Force and Motion* *2.1 Scalar and vector quantities– definition and examples, representation of vector, types* *of vector (unit vector, position vector, co-initial vector, collinear vector, co-planar* *vector)*	*1st*	*To find the diameter of wire using screw gauge*
	2nd	*Vector algebra- addition of vectors, Triangle & Parallelogram law (statement and formula only),*		
5th	*1st*	*Scalar and vector product (statement and formula only)*	*1st*	*To find thickness of paper using screw gauge.*
	2nd	*Force and its units, resolution of force (statement and formula only)*		
6th	*1st*	*Newton's laws of motion (statement and examples)*	*1st*	*To determine the thickness of glass strip using a spherometer*
	2nd	*Linear momentum, Law of conservation of linear momentum (statement and examples), Impulse*		
7th	*1st*	*Circular motion: definition of angular displacement, angular velocity, angular acceleration, frequency, time period; Relation between linear and angular velocity, centripetal and centrifugal forces (definition and formula only), application of centripetal force in banking of road*	*1st*	*To determine radius of curvature of a given spherical surface by a spherometer.*
	2nd	*Rotational motion: definition with examples* *Definition of torque, angular momentum, moment of inertia and its physical significance*		
8th	*1st*	*Work- definition, symbol, formula and SI unit, types of work (zero work, positive work and negative work) with example*	*1st*	*To verify parallelogram law of force*
	2nd	*Friction– definition and its simple daily life applications*		

9th	*1st*	*Power- definition, formula and units*	*1st*	*To determine the atmospheric pressure at a place using Fortin's Barometer*
	2nd	*Energy- definition and its SI unit, examples of transformation of energy.*		
10th	*1st*	*Kinetic energy- definition, examples, formula and its derivation*	*1st*	*To determine force constantof spring using Hooke's law*
	2nd	*Potential energy- definition, examples, formula and its derivation*		
11th	*1st*	*Law of conservation of mechanical energy for freely falling bodies (with derivation)*	*1st*	*Measuring room temperature with the help of thermometer and its conversion in different scale.*
	2nd	*Simple numerical problems based on formula of Power and Energy*		
12th	*1st*	*Elasticity and plasticity- definition, deforming force, restoring force, example of elastic and plastic body* *Definition of stress and strain, Hooke's law, modulus of elasticity*	*1st*	*Revision and File Checking*
	2nd	*Pressure- definition, atmospheric pressure, gauge pressure, absolute pressure, Pascal's law* *Surface tension- definition, SI unit, applications of surface tension, effect of temperature on surface tension* *Viscosity: definition, unit, examples, effect of temperature on viscosity*		
13th	*1st*	*Definition of heat and temperature (on the basis of kinetic theory)*	*1st*	*Revision and File Checking*
	2nd	*Difference between heat and temperature*		

14th	*1st*	*Principle and working of mercury thermometer*	*1st*	*Revision and File Checking*
	2nd	*Modes of transfer of heat- conduction, convection and radiation with examples.*		
15th	*1st*	*Properties of heat radiation Different scales of temperature and their relationship*	*1st*	*Viva-Voice*
	2nd	*Revision*		
16th	*1st*	*Revision*	*1st*	*Viva-Voice*
	2nd	*Revision*	*1st*	*Viva-Voice*

Lesson Plan

Name of the Faculty : Mrs. Nidhi
Discipline: *Applied Science*
Year : 1st Year
Subject :Communication Skill
LessonPlan: 15 Weeks Sep 2023-Dec 2023
Workload (lecture/practical)perweek(inhours):Lectures-02, practicals-02

Week	***Theory***		***Practical***	
	Lecture day	***Topic(including assignmenttest)***	***Practical Day (1lab=2 hours)***	***Topic***
1st	*1st*	*Techniques of reading: Skimming and Scanning*		Reading Reading Practice of lessons in the Lab Activity classes.
	2nd	*Extensive and Intensive Reading: Textual Study*		Reading Reading Practice of lessons in the LabActivity classes.
2nd	*3rd*	*Homecoming – R.N. Tagore*		Reading Reading Practice of lessons in the Lab Activity classes.
	4th	*Life Sketch of Sir Mokshagundam Visvesvarayya*		Reading Reading Practice of lessons in the LabActivity classes.

3rd	*5th*	*Homecoming – R.N. Tagore*		Reading Reading Practice of lessons in the Lab Activity classes.
		Life Sketch of Sir Mokshagundam Visvesvarayya		Reading Reading Practice of lessons in the LabActivity classes.

4th	*7th*	*Narayan Murthy's speech at LBSNA, Dehradun*		Comprehension exercises of unseen passages along with the lessons prescribed.
	8th	*UNIT II Fundamentals of Communication*		*Comprehension exercises of unseen passages along with thelessons prescribed.*
5th	*9th*	*Concept and Processof Communication,*		Vocabulary enrichment and grammar exercises based on the selected readings.
	10th	*Types of Communication (Verbal Communication)*		Vocabulary enrichment and grammar exercises based on the selected readings.
6th	*11th*	*Barriers to Communication*		Reading aloud Newspaper headlines and important articles.
	12th	*Speaking Skill: Significance and essentials of Spoken Communication*		Reading aloud Newspaper headlines and important articles.
7th	*13th*	*Listening Skill: Significance and essentials of Listening*		Fundamentals of Communication i. Introducing oneself, others and leave- taking(talking about yourself)
	14th	*UNIT III Grammar and Usage*		Fundamentals of Communication i. Introducing oneself, others and leave- taking(talking about yourself)
8th	*15th*	*UNIT III Grammar and Usage*		Just a minute (JAM) sessions: Speaking extempore for one minute

				on given topics
	16th	*Nouns*		
9th	*17th*	*Laws of photometry,*		Viva Voice Revision and file checking

	18th	*Pronouns*		Just a minute (JAM) sessions: Speaking extempore for one minute on given topics
10th	*19th*	*Articles*		Situational Conversation: Offering-Responding to offers; Congratulating; Apologising and Forgiving; Complaining; Talking about likes and dislikes, Self-introduction Mock Interviews.
	20th	*Verbs(Main and Auxiliary)*		Situational Conversation: Offering-Responding to offers; Congratulating; Apologising and Forgiving; Complaining; Talking about likes and dislikes, Self-introduction Mock Interviews.
11th	*21st*	*Tenses*		Grammar and Usage i. Written and Oral Drills will be undertaken in the class to facilitate holistic linguistic competency among learners.
	22nd	*UNIT IV* *Writing Skills*		*Grammar and Usage* *i. Written and Oral Drills will be undertaken in the class to facilitate holistic linguistic competency among learners.*
12th	*23rd*	*Significance, essentials and effectiveness of*		Exercises on the prescribed grammar topics.

		Written Communication		Exercises on the prescribed grammar topics.
	24th	*Notice Writing*		
13th	*25th*	*Official Letters and E-mails.*		Exercises on the prescribed grammar topics.
	26th	*Official Letters and E-mails.*		

14th	*27th*	*Paragraph Writing*		Exercises on the prescribed grammar topics.
	28th	*Netiquettes*		*Writing Skills* *i. Students should be given Written Practice in groups so as to inculcate team-spirit and collaborative learning*
15th	*29th*	***Revision***		Group exercises on writing paragraphs on given topics.
	30th	***Revision***		Group exercises on writing paragraphs on given topics.
16th	*31st*	***Revision***		Opening an e-mail account, receiving and sending emails
	32nd	***Revision***		Opening an e-mail account, receiving and sending emails

Name of the Faculty	**Heena Rani**
Discipline	**Computer Engg**
Semester and Subject Lesson Plan Duration	**1st , Electronics workshop**
Work Load (Practical) per week (in hours)	**16 Weeks**
	Practical-12

Week	**Practical**		
	Practical Day	**Topic**	**Groups**
1st	Day 1 Day 2	Concept of Resistors, Color Coding, Tolerance, Maximum power rating, Application of LDR.	G 1 & G 2
	Day 3 Day 4	Classification of Capacitors, Coding of capacitors-using numerals, directly printed valueson capacitors, Ceramic capacitor and Electrolytic capacitor.	G 1 & G 2
2nd	Day 1 Day 2	Concept of Inductors.	G 1 & G 2
	Day 3 Day 4	Testing of components using Multi meter/LCR Q-meter.	G 1 & G 2
3rd	Day 1 Day 2	Identify different types of soldering guns and practice soldering of different electronic.	G 1 & G 2
	Day 3 Day 4	Join the broken PCB track and test.	G 1 & G 2
4th	Day 1 Day 2	Practice de-soldering using pump and wick.	G 1 & G 2
	Day 3 Day 4	Prepare component for soldering.	G 1 & G 2
5th	Day 1 Day 2	Demonstrate soldering and de-soldering using soldering and de-soldering stations.	G 1 & G 2
	Day 3 Day 4	Identify different types of mains transformers and their testing.Identify the primary and secondary transformer windings and test the polarity.	G 1 & G 2
6th	Day 1 Day 2	Identify different sizes, shapes of cores used in low capacity transformers.Measure the primary and secondary voltage of different transformers.	G 1 & G 2
	Day 3 Day 4	PN junction diode: Terminal Identification, setting on bread board and testing.Zener diode: Terminal Identification, setting on bread board and testing.	G 1 & G 2
7th	Day 1 Day 2	LED, Photo diode :Terminal Identification, setting on bread board and testing. Integrated Circuits (ICs) like 7404, 7408, 7432, 7805, 555, 741: Pin diagram, Identification, setting on bread board and testing.	G 1 & G 2
	Day 3 Day 4	Switches, Application of Toggle, Rotary, push to on & push to off .Relays and application of General purpose relay.	G 1 & G 2

8th	Day 1 Day 2	Power Supply, DC power supply, Concept of Dual power supply. Cathode Ray Oscilloscope (CRO), CRO probes, Front panel controls, AC/DC voltage measurement, Frequency measurement, wave form generation.	G 1 & G 2
	Day 3 Day 4	Function Generator, Front panel controls, Functions: sine wave, square wave, triangular wave and Amplitude measurement.Digital Multi Meter, Front panel controls of DMM.	G 1 & G 2
9th	Day 1 Day 2	Study of AC and DC Waveforms.Construction of various electronic circuits on breadboard Circuits like: rectifiers, filter circuits, clipper, clamper, transistor amplifiers, logic gates, LED driver circuit, power supply, etc.	G 1 & G 2
	Day 3 Day 4	Testing of outputs of various electronic circuits using test Equipment.	G 1 & G 2
10th	Day 1 Day 2	AC and Electrical Cables.Identify the Phase, Neutral and Earth on power Socket.	G 1 & G 2
	Day 3 Day 4	Construct a test lamp and use it to check mains.	G 1 & G 1 &
11th	Day 1 Day 2	Use a Tester to monitor AC power.	G 1 & G 2
	Day 3 Day 4	Measure the voltage between phase and ground and rectify earthing.	G 1 & G 2
12th	Day 1 Day 2	Identify and test different AC mains cables.	G 1 & G 2
	Day 3 Day 4	Skin the electrical wires /cables using the wire stripper and cutter.	G 1 & G 2
13th	Day 1 Day 2	Prepare the mains cable for termination.	G 1 & G 2
	Day 3 Day 4	Measure AC and DC voltages using multi meter.	G 1 & G 2
14th	Day 1 Day 2	Replace the fuse, battery for the given multimeter.	G 1 & G 2

	Day 3 Day 4	Revision	G 1 & G 2
15th	Day 1 Day 2	Revision	G 1 & G 2
	Day 3	Revision	G 1 &
16th	Day 1 Day 2	file check	G 1 & G 2
	Day 3 Day 4	internal practical	G 1 & G 2

Name of the Faculty : **RAVINDER SHEORAN**
Department : Computer Engineering
Semester : 3rd
Subject : Operating System
Lesson Plan Duration : 15 weeks
****Work load (Lecture / Practical) per week (in hours): Lectures-03, practical -04**

Week	Theory		Practical	
	Lecture day	**Topic (Including assignment / test)**	**Practical Day**	**Topic**
1st	1st	Definition of Operating Systems	1st	Demonstration of all the controls provided in windows control panel
	2nd	Types of Operating Systems: Batch Systems, Multi-		
	3rd	Types of Operating Systems: Time Sharing Systems,		
2nd	4th	Operating System Services, User operating system	2nd	Exercise on Basics of windows
	5th	System Calls, Types of System Calls		
	6th	System Programs		
3rd	7th	Operating System Structure	3rd	Installation of Linux Operating System
	8th	Virtual Machine, Benefits of Virtual Machine		
	9th	Revision of the unit		
4th	10th	Process concept, Process State, Process Control Block,	4th	Usage of directory management commands of Linux: ls, cd, pwd, mkdir, rmdir
	11th	Scheduling Queues, Scheduler, Job Scheduler, Process		
	12th	Context Switch, Operations on Processes		
5th	13th	Interposes Communication	5th	Usage of File Management commands of Linux: cat, chmod,cp, mv, rm, pg, more, find
	14th	Shared Memory Systems, Message-Passing Systems		
	15th	CPU Scheduler, Scheduling Criteria, Process		
6th	16th	SchedulingAlgorithms,Pre-emptive and Pre-emptive	6th	Use the general purpose commands of Linux: wc, od, lp, cal , date, who, whoami
	17th	First come first serve (FCFS), Shortest Job first		
	18th	Revision of the Unit II		
7th	19th	Deadlock, Conditions for Dead lock Methods for handling deadlocks	7th	Using the simple filters: pr, head, tail, cut, paste, nl, sort
	20th	Dead Prevention, Deadlock Avoidance		
	21st	Deadlock detection ,Recovery from deadlock		
8th	22nd	Definition – Logical and Physical address Space	8th	Communication Commands: news, write, talk, mseg, mail, wall
	23rd	Swapping, Memory allocation partition		
	24th	Class Test of Topics Covered		
9th	25th	Internal and External fragmentation and Compaction	9th	Write a shell program that finds the factorial of a number
	26th	Paging – Principle of operation, Page allocation		
	27th	Hardware support for paging, Disadvantages of paging		
10th	28th	Protection and sharing	10th	Write a shell program that finds whether a given number is prime or not
	29th	Segmentation, Virtual Memory		
	30th	Class Test of Unit III		
11th	31st	Dedicated Devices, Shared Devices,	11th	Write a shell program to find the average of three numbers
	32nd	I/O Devices, Storage Devices,		
	33rd	Buffering, Spooling		
12th	34th	Types of File System; Simple file system	12th	Write a shell program that will

	35th	Basic file system, Logical file systemPhysical file system		convert all the text of the file from lowercase to uppercase
	36th	Various Methods of Allocating Disk Space		
13th	37th	History of Linux and Unix, Linux Overview	13th	Practice the general purpose commands of Linux
	38th	Structure of Linux, Linux releases, Open Linux,Linux		
	39th	Linux Commands and Filters: mkdir, cd,rmdir, pwd, ls, who, whoami,		
14th	40th	cp, mv, rm,pg,more, pr, tail, head, cut, paste, nl	14th	Practice Shell Programming
	41st	grep, wc, sort, kill, write, talk,mseg, wall, merge,mail, news		
	42nd	Revision of Linux Commands		
15th	43rd	Shell: concepts of command optionsinput, output,redirection,pipesredirecting	15th	Practice Vi editor Programs
	44th	and piping with standard errorsShell scripts		
	45th	vi editing commands and Revision of Shell Script and vi editor		

Government Polytechnic,
Panchkula
Lesson Plan (Odd Semester)

Name of the Faculty : Dr. Meenu Nain
Discipline : Computer Engineering
Department : Computer Engineering
Semester : 3rd
Subject : Programming in C
Lesson Plan Duration : 16 weeks (from september, 2022)
Work load (Lecture / Practical) per week(in hours): Lectures - 03, Practicals - 06

	Theory		**Practical**	
Week	**Lecture day**	**Topic (Including assignment / test)**	**Practical Day**	**Topic**
1st	1	Steps in development of a program	1st	Programming exercises on executing and editing a C program.
	2	Flow charts,		
	3	Algorithm development		
2nd	4	Programme Debugging		
	5	I/O statements	2nd	Programming exercises on defining variables and assigning values to variables
	6	Constants, variables		
3rd	7	assign statements		
	8	data types		
	9	Operators and Expression	3rd	Programming exercises on arithmetic and relational operators
4th	10	Operators and Expression	4th	Programming exercises on arithmetic expressions and their evaluation.
	11	Unformatted and Formatted IOS		
	12	Data Type Casting	5th	Programming exercises on formatting input/output using printf and scanf and their return type values
5th	13	Introduction to Control Structures	6th	Programming exercises using if statement.
	14	Decision making with IF – statement		
	15	IF – Else	7th	Programming exercises using if – Else.
6th	16	Nested IF		
	17	While and do-while,	8th	Programming exercises on do – while, statement.
	18	for loop		Programming exercises on for – statement.
7th	19	Break. Continue, goto	9th	Programming exercises on switch

	20	switch statements		statement.
	21	Introduction to pointers	10th	Simple programs using pointers.
8th	22	Address operator and pointers		
	23	Declaring pointers		
	24	Initializing Pointers		
9th	25	Single pointer,		
	26	Introduction to functions	11th	Simple programs using functions
	27	Global and Local Variables		
10th	28	Function Declaration		
	29	Standard functions		
	30	Parameters and Parameter Passing		
11th	31	Call - by value/reference		
	32	Introduction to Arrays	12th	Programs on one-dimensional array.
	33	Array Declaration, Length of array		
12th	34	Single Array.		
	35	Multidimensional Array	13th	Programs on two-dimensional array.
	36	Arrays of characters		
13th	37	Introduction of Strings	14th	Programs for putting two strings together.
	38	String declaration and definition		
	39	String Related function i.e. strlen, strcpy		
14th	40	String Related function i.e. strcmp	15th	Programs for comparing two strings.
	41	Passing an array to function		
	42	Pointers to an array and strings.		
15th	43	Pointers to an strings.		
	44	Declaration of structures	16th	Simple programs using structures Simple programs using union.
	45	Accessing structure members		
16th	46	Structure Initialization		
	47	Pointer to a structures,		
	48	Unions		

GOVERNMENT POLYTECHNIC PANCHKULA

LESSON PLAN

Name of Faculty: **AMITA**

Discipline: **COMPUTER ENGG.**

Semester: **3rd**

Subject: **DBMS**

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

Week	Theory		Practical	
1st Week	1st Day	Unit:1 Introduction 1.1 Database Systems 1.1.1 Introduction to Database and its purpose 1.1.2 Introduction to Database system 1.1.3 Why Database 1.1.4 History of Database System 1.1.5 Characteristics of the database approach	4 hrs	Overview, Features and functionality in MS- Access.
	2nd Day	1.1.6 Advantages and disadvantages of database systems		
		1.1.7 Introduction to Conventional File System 1.1.8 Concept of files, record, data, information retrieval.		
2nd Week	3rd Day	1.1.9 Comparison between Conventional System and DataBase System	4 hrs	Application development in MS- Access
		1.2.1 Actors on the scene		
	4th Day	1.2.2 Database Administrators, Database Designers, End Users, System Analysts and Application Programmers		
3rd Week	5th Day	1.2.3 Workers behind the scene (DBMS system designers and implementers, tool developers, operator and maintenance personnel)	4 hrs	Practice on Application development in MS- Access
		1.2.4 History of data base System		
	6th Day	Test		
4th week	7th Day	Unit2:Database System Concepts and Architecture 2.1Data models: (Physical Model, Object based Model)	4 hrs	Exercises on different forms of select statement in SQL.
	8th Day	Record based Model Network Model, Hierarchical Model		

		Schemas, sub schemas instances, data base state.		
5th Week	9th Day	Case Study of models and schemas (examples student information System)	4 hrs	Practical Lab Test
	10th Day	2.2 DBMS Architecture: Three Level of Architectures 2.2.1 The External level 2.2.2 The conceptual level 2.2.3 The internal level 2.2.4 Mapping		
		2.3 Data base Administrator and Administration, Database Management System – Advantage and Disadvantage		
6th week	11th Day	Classification of DBMS, DBMS Interfaces	4 hrs	Exercises on different forms of altering of tables in SQL.
	12th Day	2.4 Concept of centralized and Client /Server Architecture for DBMS: Single Tier, Two Tier and Three Tier		
		2.5 Data Independence 2.5.1 Logical data Independence 2.5.2 Physical data Independence		
7th week	13th Day	2.6 Database Languages and Interfaces 2.6.1 DBMS Language 2.6.2 DBMS Interfaces	4 hrs	Exercises on droping of tables in SQL.
		2.7 Classification of Database Management Systems: Centralized, Distributed Parallel and Object based Models		
	14th Day	Test		
8th week	15th Day	Unit3: Data Modeling using E.R. Model (Entity Relationship Model) 3.1Data Models Classification : File based Models	4 hrs	Exercises on creation of tables
	16th Day	Primitive models		
		3.2 Entities and Attributes		
9th week	17th Day	3.3 Entity types and Entity sets	4 hrs	Practice in SQL
		3.4 Key attribute and domain of attributes		
	18th Day	3.5 Relationship among entities		

10th week	19th Day	3.6 Database design with E/R model	4 hrs	Practical Lab Test
	20th Day	3.7 ER Design Issues		
		3.8 Mapping Constraints		
11th week	21st Day	Test	4 hrs	Exercises on insertion of data into tables
	22nd Day	Unit 4 : Relational Model: 4.1 Relational Model Concepts: Domain, Attributes,Tuples		
		4.1 Cardinality, Keys(Primary, Secondary Keys)		
12th week	23rd Day	4.1 Alternative Keys,Candidate Keys etc	4 hrs	Practice in SQL
		4.1 Relations in detail		
	24th Day	Test		
13th week	25th Day	Unit 5 :Structured Query Language(Introduction) Data definition language : Create, Alter, Drop commands	4 hrs	Exercises on UPDATE statement
	27th Day	5.1 Data Manipulation Language (DML)		
		5.2 Select command with where clause using conditional expressions.		
14th week	28th Day	Update Command,Alter Command	4 hrs	Practical in SQL
	29th Day	Various Queries in SQL		
		Boolean operators, Group by clause		
15th week	30th Day	Like Operator	4 hrs	Practical Lab Test
		5.3 Insert, Update and Delete commands		
	31st Day	Test		

LESSON PLAN

NAME OF FACULTY: MRS. SUMAN CHAUDHARY

DISCIPLINE: COMPUTER ENGINEERING

SEMESTER: 3rd

SUBJECT: DIGITAL ELECTRONICS

LESSON PLAN DURATION: 16 WEEKS

WORK LOAD (LECTURE/ PRACTICAL): LECTURES-3, PRACTICALS -3

WEEK	THEORY		PRACTICAL	
1st	**LECTURE DAY**	**TOPIC**	**PRACTICAL DAY/PERIOD**	**TOPIC**
	1	**UNIT 1 Introduction**	1-3	Introduction
	2	Distinction between analog and digital signal		
	3	Applications and advantages of digital signals		
2nd	**1**	**UNIT 2 Number System** Binary, octal and hexadecimal number system: conversion from decimal and hexadecimal to binary vice-versa.	1-3	Introduction
	2	Binary, octal and hexadecimal number system: conversion from decimal and hexadecimal to binary and vice-versa.		
	3	Binary addition and subtraction including binary points. 1's and 2's complement method of addition/subtraction.		
3rd	**1**	**UNIT 3 Codes and Parity** Concept of code, weighted and non-weighted codes	1-3	Introduction
	2	Examples of 8421, BCD, excess-3 and Gray code		
	3	Concept of parity, single and double parity and error detection		
4th	**3**	**UNIT 4 Logic Gates and Families** Concept of negative and positive logic	1-3	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR(EXNOR) gates
	1	Definition, symbols and truth tables of NOT, AND		
	2	OR, NAND, NOR, EXOR Gates		
5th	**1**	NAND and NOR as universal gates	1-3	
	2	Introduction to TTL and CMOS logic families		
	3	**TEST**		
6th	**1**	**UNIT 5 Logic Simplification** Postulates of Boolean algebra, De Morgan's Theorems	1-3	Realization of logic functions with the help of NAND or NOR gate
	2	Implementation of Boolean (logic) equation with gates		
	3	Karnaugh map (upto 4 variables)		
7th	**1**	simple application in developing combinational logic circuits	1-3	
	2	**UNIT 6 Arithmetic circuits**		

		Half adder and Full adder circuit		
	3	design and implementation		
8th	**1**	4 bit adder circuit	1-3	To design a half adder using XOR and NAND gates and verification of its operation
	2	**UNIT 7 Decoders, Multiplexeres, De Multiplexeres and Encoder** Four bit decoder circuits for 7 segment display		
	3	decoder/driver ICs		
9th	**1**	Basic functions and block diagram of MUX	1-3	
	2	DEMUX with different ICs		
	3	Basic functions and block diagram of Encoder		
10th	**1**	**UNIT 8 Latches and flip flops** Concept and types of latch with their working and applications	1-3	Construction of a full adder circuit using XOR and NAND gates and verify its operation
	2	Operation using waveforms and truth tables of RS flip flops		
	3	T, D, Master/Slave JK flip flops		
11th	**1**	Difference between a latch and a flip flop	1-3	
	2	**UNIT 9 Counters** Introduction to Asynchronous and Synchronous counters		
	3	Asynchronous and Synchronous counters		
12th	**1**	Binary counters	1-3	Verification of truth table for positive edge triggered, negative edge triggered, level triggered IC flip-flops (At least one IC each of D latch , D flip-flop, JK flip-flops).
	2	Divide by N ripple counters,		
	3	Decade counter, Ring counter		
13th	**1**	**UNIT 10 Shift Register** Introduction and basic concepts including shift left and shift right.	1-3	Verification of truth table for encoder and decoder ICs, Mux and DeMux
	2	Serial in parallel out, serial in serial out		
	3	Parallel in serial out, parallel in parallel out		
14th	**1**	Universal shift register	1-3	To design a 4 bit SISO, SIPO, PISO, PIPO shift registers using JK/D flip flops and verification of their operation
	2	**UNIT 11 A/D and D/A Converters** Working principle of A/D and D/A converters		
	3	Brief idea about different techniques of A/D conversion and study of : Stair step Ramp A/D converter		
15th	**1**	Dual Slope A/D converter Successive Approximation A/D Converter	1-3	To design a 4 bit ring counter and verify its operation.
	2	Detail study of : Binary Weighted D/A converter, R/2R ladder D/A converter		
	3	Applications of A/D and D/A converter		
16th	**1**	**UNIT 12 Semiconductor Memories** Memory organization, classification of semiconductor memories (RAM, ROM, PROM, EPROM,	1-3	Use of Asynchronous Counter ICs (7490 or 7493)
	2	EEPROM), static and dynamic RAM, introduction to 74181 ALU IC		
	3	**REVISION**		

GOVERNMENT POLYTECHNIC SECTOR-26,PANCHKULA
Lesson Plan (Odd Semester)

Name of the Faculty : Neha Midha
Discipline : Computer Engineering
Department : Computer Engineering
Semester : 5TH
Subject : Web Development Using PHP
Lesson Plan Duration:15 weeks

Week	Theory		Practical	
	Lecture day	**Topic (including assignment / test)**	**Practical day**	**Topic**
1st	1st	Introduction to PHP	1	Design PHP based web pages using correct PHP, CSS, and XHTML syntax, structure
	2nd	How PHP Works		
	3rd	The php.ini File, Basic PHP Syntax		
2nd	4th	PHP Tags	2	Design PHP based web pages using correct PHP, CSS, and XHTML syntax, structure
	5th	PHP Statements and Whitespace		
	6th	PHP Statements and Whitespace		
3rd	7th	Variable Types	3	Design PHP based web pages using correct PHP, CSS, and XHTML syntax, structure
	8th	Variable Names (Identifiers		
	9th	Type Strength, Variable Scope		
4th	10th	Constants, assisgnment	4	Create Web forms and pages that properly use HTTP GET and POST protocol as appropriate
	11th	Variable-Testing		
	12th	Manipulation Functions		
5th	13th	Operators: Strings	5	Create Web forms and pages that properly use HTTP GET and
	14th	Arrays, comments		

	15th	Sessional test		POST protocol as appropriate
6th	16th	Methods and Functions	6	Create Web forms and pages that properly use HTTP GET and POST protocol as appropriate
	17th	Built in functions		
	18th	User-defined functions		
7th	19th	Function arguments, Returning values	7	Design SQL language within MySQL and PHP to access and manipulate databases
	20th	Variable functions		
	21st	Anonymous functions		
8th	22nd	Control statements	8	Design SQL language within MySQL and PHP to access and manipulate databases
	23rd	Conditional Processing		
	24th	If Conditions , assignment		
9th	25th	Loops : while loop	9	Install and configure both PHP and MySQL
	26th	do...while, for loops		
	27th	break and continue		
10th	28th	PHP forms	10	Install and configure both PHP and MySQL
	29th	Login Security Authentication(User logins)		
	30th	Sessional test		
11th	31st	Authorization (Permissions)	11	Create PHP code that utilizes the commonly used API library functions built in to PHP.
	32nd	Encryption		
	33rd	Session Cookies		
12th	34th	PHP Mail	12	Create PHP code that utilizes the commonly used API library functions built in to PHP.
	35th	PHP Mail		
	36th	File Handling		
13th	37th	File Handling	13	Design and create a complete web site that demonstrates good PHP/MySQL client/server design
	38th	File Uploading		
	39th	File Uploading, assignment		
14th	40th	Introduction to MySQL	14	Design and create a complete web site that demonstrates good
	41st	Database design		

	42nd	Database Development using MySql		PHP/MySQL client/server design
15th	43rd	PHP Connectivity with MySQL	15	Design and create a complete web site that demonstrates good PHP/MySQL client/server design
	44th	PHP Connectivity with MySQL		
	45th	Sessional Test		

Lesson Plan

Name Of Faculty **: Suman Chaudhary**
Discipline **: Computer Engg.**
Semester **: Vth**
Subject **:Computer Network**
Lesson Plan Duration: 16 Weeks
Work Load (Lecture / Practical) per week (In hours): Lecture-4, Practical-2)

Week	Theory		Practical	
	Lecture Day	**Topic (Including Assignment / Test)**	**Practical Day**	**Topic**
1	1	Models of network computing,Networking Models	1	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network
	2	Peer to peer network,Server Client Network,Network Services		
	3	Concept of switching,Switching Techniques		
2	1	Assignment And Revision	2	Recognition and use of various types of connectors RJ-45, RJ-11,BNC
	2	OSI Reference Model		
	3	Function of various layers in OSI Reference Model		
3	1	Function of various layers in OSI Reference Model	3	Recognition of network devices (Switches, Hub, Routers of access points for Wi-Fi
	2	Function of various layers in OSI Reference Model		
	3	Function of various layers in OSI Reference Model		
4	1	Function of various layers in OSI Reference Model	4	Making of cross cable and straight cable
	2	Assignment And Revision		
	3	Concept of physical and logical addressing		
5	1	IPV4 addressers- Address space, Notations, Classful Addressing, Classl	5	Viva Voice
	2	Classless Addressing, Network Address Translation.		
	3	Different classes of IP addressing, special IP address		
6	1	Sub netting and super netting,Loop Back concept	6	Study and Demonstration of sub netting of IP address
	2	Sub netting and super netting,Loop Back concept		
	3	IPV4 and IPV6 packet Format		
7	1	IPV4 and IPV6 packet Format	7	Study and Demonstration of sub netting of IP address
	2	Assignment And Revision		
	3	Test 1		
8	1	Ethernet Specification and Standardization	8	Identify the IP address of a workstation and the class of the address and configure the
	2	10 Mbps (Traditional Ethernet), 10 Mbps (Fast Ethernet)		
	3	10 Mbps (Traditional Ethernet), 10 Mbps (Fast Ethernet)		
9	1	1000 Mbps (Gigabit Ethernet)	9	Identify the IP address of a workstation and the class of the address and configure the
	2	Introduction to Media Connectivity (Leased lines, ISDN, PSTN		
	3	RF, DSL, VSAT, Optical and IPLC)		
10	1	Introduction to Media Connectivity (Leased lines, ISDN, PSTN	10	Install and configure a network interface card in a workstation.
	2	RF, DSL, VSAT, Optical and IPLC)		
	3	Assignment And Revision		
11	1	Test 2	11	Viva Voice
	2	Network connectivity Devices:-NICs		
	3	Hubs, bridges,Repeaters, switches		
12	1	Hubs, bridges,Repeaters, switches	12	Installation of Network Operating System(NOS)
	2	Multiplexers,Modems		
	3	Routers,Gateways		
13	1	Routers,Gateways	13	Installation of Network Operating System(NOS)
	2	Assignment And Revision		
	3	Trouble Shooting process		
14	1	Trouble Shooting Tools:PING,IPCONFIG	14	Use of Netstat and its options
	2	IFCONFIG, NETSTAT, TRACEROOT		
	3	Wiresharp/ Dsniffer/ Pcop		
15	1	IEEE 802.11:-Architecture,	15	Connectivity troubleshooting using PING, IPCONFIG, IFCONFIG
	2	IEEE 802.11:-Architecture,		
	3	Bluetooth- Architecture		
16	1	Bluetooth- Architecture	16	Viva Voice
	2	Assignment And Revision		
	3	Test 3		

LessonPlan

Name of Faculty. : Paras Parashar, HOD

Discipline : ComputerEngineering

Semester : 5th

Subject : SOFTWARE ENGINEERING

Workloadperweek : Lecture–03

Week	Theory	
	Lecture Day	Topic (Includingassessment/test)
1st	1st	1.IntroductiontoSoftwareEngineering(6hrs.)Introduction, Programmev/sSoftware
	2nd	ProductsEmergenceofSoftwareEngineering-EarlyComputerProgramming,
	3rd	High-levelLanguageProgramming,Controlflow-basedDesign
2nd	4th	Data StructureOrientedDesign,
	5th	ObjectOrientedDesign
	6th	SoftwareLifeCycleModels
3rd	7th	RequirementofLifeCycleModel, ClassicWaterfall Model,
	8th	PrototypingModel,EvolutionaryModel
	9th	RequirementofLifeCycleModel, ClassicWaterfall Model,
4th	10th	PrototypingModel,EvolutionaryModel
	11th	SpiralModel
		Comparison ofdifferentLifeCycleModels
	12th	SoftwarePlanning
5th	13th	ResponsibilitiesofSoftware
	14th	ProjectManager-MetricsforProjectSizeEstimation-
	15th	LOC(LinesofCode),FunctionPointMetric
6th	16th	ProjectestimationTechniques
	17th	UsingCOCOMOModel,
	18th	Halstead'sSoftwareScience
7th	19th	.RequirementAnalysisandSpecification
	20th	RequirementgatheringandAnalysis

	21st	SoftwareRequirementSpecifications(SRS)
8th	22nd	FormalSpecificationTechnique
	23rd	CharacteristicsofgoodSRS
	24th	SoftwareDesignandImplementation
9th	25th	CharacteristicsandfeaturesofgoodSoftware
	26th	DesignCohesionandCoupling
	27th	SoftwaredesignApproaches
10th	28th	FunctionOrientedDesign,
	29th	ObjectOrientedDesign,StructuredCodingTechniques
	30st	CodingStyles,documentation
11th	31nd	Software TestingConceptofTesting
	32rd	Verificationv/sValidations
	33th	UnitTesting,Blackbox Testing
12th	34th	WhiteBox Testing
	35th	Integrationtesting
	36th	Systemtesting
13th	37th	.SoftwareQuality
	38th	andMaintenance
	39th	IntroductiontoCapabilityMaturitymodel
14th	40st	ISO9000
	41nd	SixSigma
	42rd	ConfigurationManagement
15th	43th	revision
	44th	revision
	45th	revision

LESSON PLAN

NAME OF THE FACULTY: - Amita
DISCIPLINE: - CSE
SEMESTER:-5TH
SUBJECT—Computer Programming Using Python Lesson Plan Duration: - 15 weeks
Work Load (Lecture/Practical) per week (In hours): Lecture 03, Practical -06

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Week	Topic
1st	1st	Brief History of Python, Python Versions, Installing Python, Environment Variables	1st	1. Getting started with Python and IDLE in interactive and batch modes
	2nd	Executing Python from the Command Line,IDLE,Editing Python, Files,Python Documentation		
	3rd	Getting Help,Dynamic,Types,Python Reserved Words,Naming Conventions		
2nd	4th	Basic Syntax,Comments,StringValues,String Operators	2nd	2. What do the following string methods do? • lower • count • replace
	5th	String Methods,The format Method,Numeric Data Types,Conversion Functions		
	6th	Simple Output,Simple Input, The % Method,The print Function		
3rd	7th	Indenting Requirements,The if Statement	3rd	3. Write instructions to perform each of the steps below (a) Create a string containing at least five words and store it in a variable. (b) Print out the string. (c) Convert the string to a list of words using the string split method. (d)Sort the list into reverse alphabetical order using some of the list methods (you might need to use dir(list) or help(list) to find appropriate methods). (e) Print out the sorted, reversed list of words
	8th	Relational and Logical Operators, Bit Wise Operators		
	9th	The while Loop		

4th	10th	break and continue	4th	4. Write a program that determines whether the number is prime?What is your favorite number? 24 24 is not prime What is your favorite number? 31 31 is prime
	11th	The for Loop		
	12th	Introduction		
5th	13th	Lists	5th	5. Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?
	14th	Tuples		
	15th	Sets		
6th	16th	Dictionaries	6th	Swap two integer numbers using a temporary variable. Repeat the exercise using the code format: a, b = b, a. Verify your results in both the cases
	17th	Sorting Dictionaries		
	18th	Copying Collections		
7th	19th	Summary	7th	7.Find the largest of n numbers, using a user defined function largest().
	20th	Introduction,Defining Your Own Functions,Parameters		
	21st	Function Documentation, Keyword and Optional Parameters Passing Collections to a Function		
8th	22nd	Variable Number of Arguments Scope	8th	8.Write a function myReverse() which receives a string as an input and returns the reverse of the string.
	23rd	Functions - "First Class citizens", Passing Functions to a Function,map		
	24th	Filter,Mapping Functions in a Dictionary		
9th	25th	Lambda, Inner Functions, Closures	9th	9.Check if a given string is palindrome or not
	26th	Modules,Standard Modules – sys Standard Modules - math		
	27th	Standard Modules – time,The dir Function		
10th	28th	Errors, Runtime Errors	10th	10. Check if a given string is palindrome or not.
	29th	The Exception Model, Exception Hierarchy		

	30th	Handling Multiple, Exceptions, Raise		
11th	31st	Assert, Introduction, Data Streams	11th	11.WAP to convert Celsius to Fahrenheit
	32nd	Creating Your Own Data Streams, Access Modes,Writing Data to a File		
	33rd	Reading Data From a File, Additional File Methods, Using Pipes as Data Streams, Handling IO Exceptions		
12th	34th	Classes in Python, Principles of Object Orientation	12th	12. Find the ASCII value of charades
	35th	Creating Classes		
	36th	Instance Methods		
13th	37th	File Organization	13th	13.WAP for simple calculator
	38th	Special Methods		
	39th	Class Variables		
14th	40th	Inheritance	14th	Revision of Practicals
	41st	Polymorphism		
	42nd	Introduction, Simple Character Matches, Special , Characters,Character Classes		
15th	43rd	Quantifiers, The Dot Character, Greedy Matches	15th	VIVA-VOCE
	44th	Grouping, Matching at Beginning or End, Match Objects,		
	45th	Substituting a string, Compiling Regular Expressions, Flags		

Lesson Plan

Name Of Faculty **: Ravinder Sheoran**
Discipline **: Computer Engg.**
Semester **: Vth**
Subject **:Cloud Computing**
Lesson Plan Duration: 16 Weeks
Work Load (Lecture / Practical) per week (In hours): Lecture-3, Practical-3)

WEEK NO.	DAY	THEORY TOPIC COVERED	WEEK NO.	PRACTICAL DONE
1	1	Evolution of Cloud Computing	1	Introduction to Cloud Vendors: Amazon, Microsoft, IBM.
	2	Evolution of Cloud Computing		
	3	Cloud Computing Overview		
2	1	Characteristics	2	
	2	Applications		
	3	Benefits and Challenges.		
3	1	Revision	3	
	2	Cloud Computing Service Models		
	3	Infrastructure as a Service		
4	1	Platform as a Service, Software as a Service;	4	Setting up Virtualization using Virtual box/VMWare Hypervisor
	2	Cloud Computing Deployment Models		
	3	Private Cloud and Public Cloud		
5	1	Community Cloud and Hybrid Cloud	5	
	2	Major Cloud Service providers		
	3	Seminar and Assignment		
6	1	Test	6	Introduction to Own Cloud
	2	Overview of SLA		
	3	Types of SLA		
7	1	SLA Life Cycle	7	
	2	SLA Management Process		
	3	Revision and Seminar		
8	1	Test	8	Installation and configuration of OwnCloud software for SaaS
	2	Overview of Virtualization		
	3	Types of Virtualization		
9	1	Types of Virtualization	9	
	2	Benefits of Virtualization		
	3	Hypervisors		
10	1	Revision and seminar	10	Accessing Microsoft AZURE cloud-services
	2	Assignment		
	3	Test		
11	1	Infrastructure Security	11	
	2	Data Security & Privacy Issues		
	3	Legal Issues in Cloud Computing		
12	1	Legal Issues in Cloud Computing	12	Cloud Simulation Software Introduction: Cloud Sim
	2	Storage as a Service		
	3	Benefits and Challenges		
13	1	Storage Area Networks (SANs).	13	
	2	Scheduling problem		
	3	Different types of scheduling		
14	1	Different types of scheduling	14	Revision of practical
	2	Scheduling for independent tasks		
	3	Scheduling for dependent tasks		

15	1	Scheduling for independent and dependent tasks	15	Viva Voice
	2	Scheduling for independent and dependent tasks		
	3	Static vs. Dynamic scheduling		
16	1	Static vs. Dynamic scheduling	16	
	2	Assignment And Revision		
	3	3rd Sessional		