Lesson Plan

Discipline : Computer Engineering

Semester : 5th

Subject : SOFTWARE ENGINEERING

Lesson Plan duration :15 weeks

Work load per week :Lecture – 03

Week	Theory	
	Lecture Day	Topic (Including assessment/test)
1st	1st	1. Introduction to Software Engineering (6 hrs.) Introduction, Programme v/s Software
	2nd	Products Emergence of Software Engineering- Early Computer Programming,
	3rd	High- level Language Programming, Control flow-based Design
2nd	4th	Data Structure Oriented Design,
	5th	Object Oriented Design
	6th	Software Life Cycle Models
3rd	7th	Requirement of Life Cycle Model, Classic Waterfall Model,
	8th	Prototyping Model, Evolutionary Model
	9th	Requirement of Life Cycle Model, Classic Waterfall Model,
4th	10th	Prototyping Model, Evolutionary Model
	11th	Spiral Model
		Comparison of different Life Cycle Models
	12th	Software Planning (
5th	13th	Responsibilities of Software
	14th	Project Manager - Metrics for Project Size Estimation-
	15th	LOC(Lines of Code), Function Point Metric
6th	16th	Project estimation Techniques
	17th	Using COCOMO Model,
	18th	Halstead's Software Science
7th	19th	. Requirement Analysis and Specification
	20th	Requirement gathering and Analysis

	21st	Software Requirement Specifications (SRS)
8th	22nd	Formal Specification Technique
	23rd	Characteristics of good SRS
	24th	Software Design and Implementation
9th	25th	Characteristics and features of good Software
	26th	Design Cohesion and Coupling
	27th	Software design Approaches
10th	28th	Function Oriented Design,
	29th	Object Oriented Design, Structured Coding Techniques
	30st	Coding Styles, documentation
11th	31nd	Software Testing Concept of Testing
	32rd	Verification v/s Validations
	33th	Unit Testing, Blackbox Testing
12th	34th	White Box Testing
	35th	Integration testing
	36th	System testing
13th	37th	. Software Quality
	38th	and Maintenance
	39th	Introduction to Capability Maturity model
14th	40th	ISO9000
	41th	Six Sigma
	42th	Configuration Management
15th	43th	Revision
	44th	revision
	45th	revision

Discipline : Computer Engg.

Semester : 5th

Subject : **Computer Networks**

Lesson Plan Duration : 15 weeks

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

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical Day	Topic
1st	1st	Networks Basics	1st	Recognize the physical topology and cabling (coaxial, OFC, UTP, STP)of a network.
	2nd	Concept of network - Models of network computing		
	3rd	- Networking models		
2nd	4th	- Peer-to –peer Network		
	5th	Server Client Network - Network Services		Recognition and use of various types of connectorsRJ-45, RJ-11, BNC and SCST
	6th	Concept of switching - Switching Techniques		
3rd	7th	OSI Model	2nd	Recognition of network devices (Switches, Hub, Routers of access points forWi-Fi
	8th	OSI Reference Model		
	9th	OSI Reference Model		
4th	10th	OSI Reference Model		
	11th	OSI Reference Model		
	12th	OSI Reference Model		
5th	13th	OSI Reference Model		Making of cross cable andstraight cable
	14th	Function of various layers in OSI Reference Model		
	15th	Function of various layers in OSI Reference Model		
6th	16th	- Function of various layers in OSI Reference Model		
	17th	- Function of various layers in OSI Reference Model		

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical Day	Topic
	18th	- Function of various layers in OSI Reference Model	3rd	Install and configure a network interface card in a workstation Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation
7th	19th	Introduction to TCP/IP	4th	Managing user accounts in windows and LINUX
	20th	Concept of physical and logical addressing - IPV4 addressers- Address space, .		
	21st	Notations, Classful Addressing, Classless Addressing, Network Address Translation		
8th	22nd	- Different classes of IP addressing, specialIP address		
	23rd	- Different classes of IP addressing, specialIP address		
	24th	- Sub netting and super netting		
9th	25th	- Sub netting and super netting		
	26th	- Loop back concept - IPV4 and IPV6 packet Format		
	27th	- Loop back concept - IPV4 and IPV6 packet Format	5th	Study and Demonstration of sub netting of IP address Use of Netstat and itsoptions. Connectivity troubleshootin g usingPING, IPCONFIG, IFCONFIG
10th	28th	Network Architecture		
	29th	Ethernet Specification and Standardization:		
	30th	10 Mbps (Traditional Ethernet),		
11th	31st	10 Mbps (Fast Ethernet) and 1000 Mbps (Gigabit Ethernet), Introduction to Media)		
	32nd	Connectivity (Leased lines, ISDN, PSTN,RF,		
	33rd	DSL, VSAT, Optical and IPLC		
12th	34th	Connectivity devices		

Week	Theory		Practical	
	Lecture day	Topic (including assignment / test)	Practical Day	Topic
	35th	Network connectivity Devices 100 - NICs - Hubs, bridges - Repeaters, switches - Routers - Gateways		
	36th	Multiplexers - Modems		
13th	37th	Network Trouble Shooting Techniques	6th	Installation of Network Operating System (NOS) Visit to nearby industry forlatest networking techniques
	38th	Trouble Shooting process - Trouble Shooting Tools:, ,		
	39th	PING,IPCONFIG		
14th	40th	PING,IPCONFIG		
	41st	IFCONFIG, NETSTAT		
	42nd	TRACEROOT, Wiresharp / Dsniffer/ Pcop		
15th	43rd	IEEE 802.11- Architecture		
	44th	IEEE 802.11- Architecture		
	45th	Bluetooth- Architecture		

Discipline : Computer Engg.

Semester : 5th

Subject : Programming using Python

Lesson Plan Duration: 15 weeks

Week	Theory		Practical	
	Lecture Day	Topic (including assignment / test)	Practical Day	Topic
1st	1th	Brief History of Python Python Versions	1	Getting started with Python and IDLE ininteractive and batch modes
	2nd	Installing Python Environment VariablesExecuting Python from the Command Line IDLE	2	Implementation of string methodsLower Count Replace
	3rd	Editing Python Files PythonDocumentation		
2nd	4th	Getting Help Dynamic TypesPython Reserved Words	3	Create a string containing at least fivewords and store it in a variable. 1. Print out the string. 2. Convert the string to a list of wordsusing the string split method.
	5th	Naming Conventions Basic SyntaxComments String Value	4	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).
	6th	String Methods The format Method String OperatorsNumeric Data Types		
3rd	7th	Conversion Functions Simple OutputSimple Input The % Method	5	Print out the sorted, reversed list ofwords.

	8th	The % Method The print Function Indenting Requirements The if Statement	6	Write a program that determines whether the number is prime.
	9th	Relational and Logical Operators Bit Wise Operators		
4th	10th	The while Loop Break and continue	7	Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?
	11th	The for Loop Introduction Lists Tuples	8	Swap two integer numbers using a temporary variable. Repeat the exercise using the code format: a, b = b, a. Verifyyour results in both the cases.
	12th	Sets Dictionaries Sorting Dictionaries Copying Collections Summary		
5th	13th	Introduction Defining Your Own Functions Parameters	9	Programming exercises on formatting input/output using printf and scanf and their return type values
	14th	Function Documentation Keyword and Optional Parameters	10	Programming exercises on formatting input/output using printf and scanf and their return type values
	15th	Passing Collections to a Function Variable Number of Arguments Scope Functions - "First Class Citizens"		
6th	16th	Passing Functions to a Function map filter	11	Find the largest of n numbers, using a user defined function largest().
	17th	Mapping Functions in a Dictionary Lambda Inner Functions Closures	12	Write a function myReverse() which receives a string as an input and returnsthe reverse of the string.

	18th	Modules Standard Modules - sys Standard Modules - math		
7th	19th	Standard Modules - time The dir Function Exceptions Errors Runtime Errors	13	. Check if a given string is palindrome ornot.
	20th		14	WAP to convert Celsius to Fahrenheit .
	21st	Copying Collections		
8th	22nd	Summary	15	Find the ASCII value of charades
	23rd	Functions Introduction	16	WAP for simple calculator

	24th	Variable Number of Arguments Scope Functions - "First Class Citizens" Passing Functions to a Function		
9th	25th	Function Documentation Keyword and Optional Parameters	17	WAP to convert Celsius to Fahrenheit
	26th	Passing Collections to a Function	18	Implementation of stringmethods LowerCount Replace
	27th			
10th	28th	Filter Mapping Functions in a Dictionary	19	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).
	29th	Modules Standard Modules - sys	20	Write a program that determines whether the number is prime.
	30th	Standard Modules - math Standard Modules - time The dir Function		
11th	31st	Exceptions Errors	21	Write a program that determines whether the number is prime.
	32nd	Runtime Errors The Exception Model Exception Hierarchy	22	Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?

	33 th	Handling Multiple Exceptions Raise Assert		
12th	34 th	Input and Output Introduction Data Streams Creating Your Own Data Streams	23	Swap two integer numbers using a temporary variable. Repeat the exercise using the code format: a, b = b, a. Verifyyour results in both the cases.
	35 th	Access Modes Writing Data to a File Reading Data From a File	24	Find the largest of n numbers, using a user defined function largest().
	36 th	Additional File Methods Using Pipes as Data Streams Handling IO Exceptions		
13th	37 th	Classes in Python Principles of Object Orientation Creating Classes	25	Write a function myReverse() which receives a string as an input and returnsthe reverse of the string.
	38 th	Instance Methods File Organization Special Methods	26	Check if a given string is palindrome ornot.
	39 th	Inheritance Polymorphism		
14th	40 th	Regular Expressions Introduction	27	Check if a given string is palindrome ornot.
	41st	Simple Character Matches Special Characters Character Classes	28	Check if a given string is palindrome ornot.
	42 th	Quantifiers The Dot Character Greedy Matches		
15th	43rd	Grouping Matching at Beginning or End Match Objects	29	WAP to convert Celsius to Fahrenheit
	44 th	Substituting Splitting a String Compiling Regular Expressions Flags	30	Revision
	45 th	Revision		

DISCIPLINE : -
ComputerEngineering SEMESTER : -
5TH
SUBJECT :WebDevelopmentusing PHP
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	Topic
1st	1	Introduction to HTML 5	1st	Design PHP based webpages using correct PHP, CSS, and XHTML syntax, structure.
	2	Introduction to CSS 3		
	3	Basic structure of HTML, designing a web page		
2nd	4	inserting liks images, horizontal rules, comments		
	5	Formatting text, title, headings		
	6	colors, fonts, sizes, simple tables		
3rd	7	Forms, HTML tags, hyperlinks	2nd	Create Web forms and pages that properly use HTTP GET and POST protocol as appropr iate.
	8	adding graphics and images, image maps, image files		
	9	using tables, forms		
4th	10	Using Style sheets and frames, Floating of web site/pages.	3rd	Design SQL languagewithin MySQL and PHP to access and manipulate databases.
	11	Revision		
	12	Revision/Test		
5th	13	Introduction to PHP		
	14	How PHP Works		
	15	The php.ini File		
6th	16	Basic PHP Syntax,	4th	Install and configure both PHP and MySQL.
	17	PHP variables, statements		
	18	operators		
7th	19	decision making	5th	Create PHP code that utilizes the commonlyused API library functions built in to PHP.
	20	loops		
	21	arrays		
8th	22	Strings, forms	6th	Design and create a complete web site that demonstrates good PHP/MySQL client/server design.
	23	get and post methods		
	24	functions		
9th	25	Revision		
	26	Introduction to cookies		
	27	storage of cookies at client side		
10th	28	Using information of cookies	7th	To store a cookie using
	29	Creating single or multiple server-side		

				PHP on client side.

		sessions		
	30	Timeout in sessions		
11th	31	Event management in PHP	9th	Design website using wordpress or Joomla.
	32	Revision		
	33	Introduction to content management systems based on PHP- Part 1		
12th	34	Introduction to content management systems based on PHP- Part 2		
	35	Revision/Test		
	36	Introduction to MySQL		
13th	37	connecting to MySQL database using PHP		
	38	Creation of MySQL data using PHP – Part 1		
	39	Creation of MySQL data using PHP – Part 2		
14th	40	Insertion of MySQL data using PHP – Part 1		Revision
	41	Insertion of MySQL data using PHP – Part 1		
	42	deletion of MySQL data using PHP.		
15th	43	retrieval of MySQL data using PHP.		Revision
	44	Revision		
	45	Revision/test		

Department : Computer Engineering

Semester : 5th

Subject : Cloud computing

Lesson Plan Duration : 15weeks

****Work load (Lecture / Practical) per week (in hours): Lectures-03, practical -03**

Week	Theory		Practical	
	Lecture day	**Topic (Including assignment / test)**	**Practical Day**	**Topic**
1st	1st	**I. Introduction** to Cloud Computing	1st	Introduction to Cloud Vendors
	2nd	Overview of Cloud Computing		
	3rd	Evolution of Cloud computing		
2nd	4th	Characteristics of Cloud Computing	2nd	Introduction to Cloud Vendors
	5th	Applications of Cloud Comp.		
	6th	Benefits of Cloud Comp.		
3rd	7th	Challenges of Cloud Comp.	3rd	Setting up Virtualization usingVirtualbox/ VMWare Hypervisor
	8th	Seminar of 1st Chapter		
	9th	**II Service and Deployment Models** Service Models : Overview		
4th	10th	Infrastructure As A Service	4th	Setting up Virtualization usingVirtualbox/ VMWare Hypervisor
	11th	Platform As A Service		
	12th	Software As A Service		
5th	13th	Cloud Computing Deployment Models:Overview	5th	Setting up Virtualization usingVirtualbox/ VMWare Hypervisor
	14th	Private Cloud		
	15th	Public Cloud		
6th	16th	Hybrid Cloud	6th	Introduction to OwnCloud
	17th	Community Cloud		
	18th	Major Cloud Service Providers		
7th	19th	Seminar of 2nd chapter	7th	Installation and configuration of OwnCloudsoftware for SaaS
	20th	**3. Service Level Agreement Management** : Overview of SLA		
	21st	Types of SLA		
8th	22nd	Types of SLA	8th	Installation and

	23rd	SLA lifecycle		configuration of OwnCloud software for SaaS
	24th	SLA management Process		
9th	25th	Seminar and 1st Sessional	9th	Installation and configuration of OwnCloud software for SaaS
	26th	**4. Virtualization Concepts** : Overview		
	27th	Types of Virtualization		
10th	28th	Benefits of Virtualization	10th	Accessing Microsoft AZURE cloud services
	29th	Hypervisors		
	30th	**5. Cloud Security:** Overview		
11th	31st	Infrastructure Security	11th	Accessing Microsoft AZURE cloud services
	32nd	Data Security		
	33rd	Privacy Issues		
12th	34th	Legal issues	12th	Accessing Microsoft AZURE cloud services
	35th	Seminar and 2nd sessional		
	36th	**6. Cloud Storage:** Overview		
13th	37th	Storage As A Service	13th	Cloud Simulation Software Introduction: CloudSim
	38th	Storage As A Service: Benefits		
	39th	Storage As A Service: Challenges		
14th	40th	SANs	14th	Cloud Simulation Software Introduction: CloudSim
	41st	**7. Scheduling in Cloud** : Overview of Scheduling Problem		
	42nd	Different types of Scheduling		
15th	43rd	Scheduling for dependent & independent tasks.	15th	Cloud Simulation Software Introduction: CloudSim
	44th	Static vs. Dynamic Scheduling		
	45th	Seminar and 3rd Sessional		

Department : Computer Engineering

Semester :3rd

Subject : Programming in C

LessonPlanDuration : 16 weeks)

****Work load (Lecture / Practical) per week(in hours): Lectures-03, practicals -08**

Week	Theory		Practical	
	Lecture day	Topic(Including assignment /test)	Practical Day	Topic
1st	1st	Algorithm and Programming Development: Introduction, Steps in development of a program	1st (G-I)	Programming exercises on executing andediting a C program
	2nd	Flow charts, Algorithm development ,		
	3rd	Algorithm and Flowchart writing for practical	2nd (G-I)	Programming exercises on executing andediting a C program
2nd	4th	Programme Debugging, Practice of error detection and corrections in examples.	3rd (G-I)	Programming exercises on definingvariables and assigning values to variables
	5th	Program Structure : Introduction to structure of C program		
	6th	Keywords, assign statements	4th (G-I)	Programming exercises on definingvariables and assigning values to variables
3rd	7th	I/O statements:Printf and Scanf,	5th(G-I)	Programming exercises on arithmeticand relational operators
	8th	Constants, variables and data types		
	9th	Operators and Expressions	6th(G-I)	Programming exercises on arithmeticand relational operators
4th	10th	Unformatted and Formatted IOS	7th(G-I)	Programming exercises on arithmeticexpressions and their evaluation
	11th	Data Type Casting		
	12th	Class Test	8th(G-I)	Programming exercises on arithmeticexpressions and their evaluation
5th	13th	Control Structures :Introduction and use	9th(G-I)	Programming exercises onformattinginput/outputusingprintfandscanfand their return type values
	14th	Decision making with IF – statement		
	15th	IF – Else and Nested IF	10th(G-I)	Programming exercises onformattinginput/outputusingprintfandscanfand their return type values
6th	16th	While and do-while, for loop	11th(G-I)	Programming exercises using if,if-else statement
	17th	Break. Continue statements		
	18th	goto and switch statements	12th(G-I)	Programming exercises using if, if-else statement
7th	19th	Revision of of unit III	13th(G-I)	Programming exercises on switch statement
	20th	Sessional Test I		
	21st	Pointers :Introduction to pointers	14th(G-I)	Programming exercises on switch statement
8th	22nd	Signed and unsigned short and long integer variable concepts	15th(G-I)	Programming exercises on do – while, statement
	23rd	Address operator and pointers , Declaring and initializing pointers		
	24th	Single pointer	16th(G-I)	Programming exercises on do – while, statement
9th	25th	Revision of unit IV	17th(G-I)	Programming exercises on for – statement
	26th	Introduction to functions		
	27th	Global and local variables	18th(G-I)	Programming exercises on for – statement
10th	28th	Function Declaration	19th(G-I)	Simple programs using pointers
	29th	Standard functions		
	30th	Parameters and Parameter Passing	20th(G-I)	Simple programs using pointers
11th	31st	Call - by value/reference	21st (G-I)	Programsonone-dimensionalarray.
	32nd	Sessional II		
	33rd	Arrays and Strings:Introduction to Arrays, Array Declaration, Length of array	22nd(G-I)	Programsonone-

				dimensionalarray.
12th	34th	Single and Multidimensional Array,Arrays of characters	23rd(G-I)	Programsontwo-dimensionalarray.
	35th	Introduction of Strings: String declaration and definition, String Related function i.e.strlen, strcpy, strcmp		
	36th	Passing an array to function	24th(G-I)	Programsontwo-dimensionalarray.
13th	37th	Pointers to an array and strings	25th (G-I)	Programsforputtingtwostrings together. , Programsforcomparingtwostrings
	38th	Structures and Unions : Introduction		
	39th	Declaration of structures	26th (G-I)	Programsforputtingtwostrings together., Programsforcomparingtwostrings
14th	40th	Accessing structure members	27th (G-I)	Simple programs using functions
	41st .	Structure Initialization		
	42nd	Pointer to structures	28th (G-I)	Simple programs using functions
15th	43rd	Unions: Introduction, Difference between Structures and unions	29th (G-I)	Simple programs using structures and union
	44th	Concept of File Handling		
	45th	Opening and Closing of File	30th (G-I)	Simple programs using structures and union
16th	46th	Modes of Accessing Files	31st (G-I)	Program on Reading and Writing data to a file.
	47th	Reading and Writing in the File	32(G-I)	Program on Reading and Writing data to a file.
	48th	Sessional III		

Lesson Plan

Discipline : **Computer Engg.**
Semester : **1st**
Subject :**Fundamentals of IT**

Lesson Plan Duration: 16 Weeks

Work Load (Lecture / Practical) per week (In hours): Lecture-2, Practical-4)

Week	Theory	
	LectureDay	**Topic (Including Assignment / Test)**
1	1	Brief history of development of computers,
	2	Definition of Computer, Block diagram of a Computer, Hardware, Software,
2	1	Booting: Cold and Hot Booting,
	2	Interaction between the CPU and Memory with Input/Output devices, Function of CPU and major functional parts of CPU.
3	1	Memory, Bit, Nibble, Byte, KB, MB, GB, TB, PB, Functions of memory,
	2	Use of storage devices in a Computer, List types of memory used in a Computer, Importance of cache memory,
4	1	CPU speed and CPU word length
	2	Understanding browser, Introduction to WWW, efficient use of search engines,
5	1	Awareness about Digital India portals (state and national portals) and college portals
	2	Various email service providers Creation of email id, sending and receiving emails,
6	1	Attaching documents with email and drive.
	2	Effective use of Gmail, G-Drive, Google Calendar, Google Sites, Google Sheets,
7	1	Online mode of communication using Google Meet & WebEx.
	2	Revesion and Test 1
8	1	Introduction to Programming,
	2	Steps involved in problem solving, Definition of Algorithm, Definition of Flowchart
9	1	Steps involved in algorithm development,
	2	differentiate algorithm and flowchart, symbols used in flowcharts,
10	1	algorithms for simple problems,
	2	flowcharts for simple problems, Practice logic building using flowchart/algorithm
11	1	Test 2
	2	Introducing LibreOffice/OpenOffice Calc, Working with Cells, Sheets, data, tables using formulae and functions, using charts and graphics.
12	1	Office Tools like LibreOffice/OpenOffice/MSOffice.
	2	OpenOffice Writer – Typesetting Text and Basic Formatting Inserting Images, Hyperlinks, Bookmarks,
13	1	Tables and Table Properties in Writer
	2	OpenOffice Impress – Creating and Viewing Presentations Inserting Pictures and Tables, Slide Master and Slide Design,
14	1	Custom Animation.
	2	Introduction to Digital Marketing Why Digital Marketing, Characteristics of Digital Marketing,
15	1	Tools for Digital Marketing
	2	Effective use of Social Media like LinkedIn, Google+, Facebook, Twitter, etc Features of Social media
16	1	Advantages and Disadvantages of Social Media.
	2	Assignment And Revision Test 3

Discipline : Comp. Engg
Year : 1st Sem
Subject : Computer workshop
Lesson Plan Duration : 15 weeks

week	Practical Topic
1	Anatomy of a Computer, Foundations of Modern Information Technology, The Central Processing Unit, How Microprocessors and Memory Chips are Made, Memory, Buses for Input and Output, communication With Peripherals.
2	Desktop: Identification of desktop and its parts, Hardware, Software and Firmware Introduction to Mother board, IO and memory expansion slots, Drives, front panel and rear panel.Processors& Bus: Introduction and types of Processor, Introduction to BUS
3	Laptop: Introduction to Laptop, advantages over Desktops Laptop components: Adapter – types, Battery – types, Laptop Keyboard and Touchpad Power Supply: Introduction to online and offline UPS, Difference between online and offline UPS
4	SMPS: Introduction to SMPS, Study of SMPS Connectors
5	Primary Memory: Introduction and types of primary memory (SDRAM, DDR RAM) Secondary Storage: Hard Disk –Working Principle of IDE, HDD Partition – Formatting, Introduction to SATA and Solid-State Drives (SSD)
6	1st Internal Sessional exam
7	Removable Storage: Introduction to CD, DVD, reading & writing operations; Introduction to Blue-ray devices Flash memory: Flash drives (pen drives), Memory cards and its types
8	Inputting Text and Graphics, State of the Art, Input and Output, Pointing Devices, Foundations of Modern Output, Display Screens, Printers, Foundations of Modern Storage, Storage Media, Increasing Data Storage Capacity, Backing up your Data, The Smart Card Keyboard: Types of keyboards (wired and wireless Keyboard), keyboards connectors, troubleshooting
9	Mouse: types, connectors, operation of Optical mouse and Troubleshooting. Printers: Introduction – Types of printers- Dot Matrix, Inkjet, LaserJet, MFP (Multi-Function Printer), advantages, disadvantages, cables and connectors, Troubleshooting. I/O Ports: Introduction and identification of Serial, Parallel, USB, HDMI.
10	Displays: Introduction to LED, LCD and TFT Displays, cables and connectors Graphic Cards: Introduction to different types of Graphics cards
11	2nd Sessional exam
12	Bios-setup: Standard CMOS setup, Advanced BIOS setup, advanced chipset features, PC Bios communication, upgrading BIOS, Flash BIOS -setup. POST and BOOTING: Definition, POST Test sequence – beep codes. Diagnostic Software and Viruses: Computer Viruses, Precautions, Anti-virus Software, Working of Antivirus software's
13	General troubleshooting of various peripheral devices (printer, pc, laptop, keyboard, mouse, monitor, hard disk)
14	Assembling and Disassembling of PC DIPLOMA IN COMPUTER ENGINEERING NSQF LEVEL - 3 HARYANA STATE BOARD OF TECHNICAL EDUCATION 29 Installation and Troubleshooting: Formatting, Partitioning and Installation of OS: Windows and Linux Installation of peripheral devices: Printers, scanner Installation of software's: application software, systems software
15	3rd Sessional Exam

Discipline: :Computer Engineering
Subject : Fundamentals of Information Technology
Lesson plan : (First sem)
Duration : 15 weeks

week		Practical
	Practical day	Topic (including Seminar)
1st	G1	Browser features, browsing, using various search engines, writing search queries
	G2	Browser features, browsing, using various search engines, writing search queries
2nd	G1	Visit various e-governance/Digital India portals,understand their features, services offered
	G2	Visit various e-governance/Digital India portals, understand their features, services offered
3rd	G1	Read Wikipedia pages on computer hardware components, look at those components in lab,identifythem, recognize various ports/interfaces and related cables, etc.
	G2	Read Wikipedia pages on computer hardware components, look at those components in lab,identifythem, recognize various ports/interfaces and related cables, etc.
4th	G1	Using Administrative Tools/Control Panel Settings of Operating Systems
	G2	Using Administrative Tools/Control Panel Settings of Operating Systems
5TH	G1	Connect various peripherals (printer, scanner, etc.) to computer, explore various features ofperipheral and theirdevice driver software.
	G2	Connect various peripherals (printer, scanner, etc.) to computer, explore various features ofperipheral and theirdevice driver software.
6TH	G1	Explore features of Open Office tools and MS-Office, create documents, createpresentation, createspread sheet, using these features, do it multiple times
	G2	Explore features of Open Office tools and MS-Office, create documents, createpresentation, createspread sheet, using these features, do it multiple times
7th	G1	Working with Conversion Software like pdfToWord, WordToPPT, etc.
	G2	Working with Conversion Software like pdfToWord, WordToPPT, etc.
8th	G1	Working with Mobile Applications – Searching for Authentic Mobile app, Installation andSettings, Govt. ofIndia Mobile Applications
	G2	Working with Mobile Applications – Searching for Authentic Mobile app, Installation andSettings, Govt. ofIndia Mobile Applications
9th	G1	Creating email id, sending and receiving mails with attachments.

	G2	Creating email id, sending and receiving mails with attachments.
10th	G1	Using Google drive, Google calendar
	G2	Using Google drive, Google calendar
11th	G1	Create Flow chart and Algorithm for the following Addition of n numbers and display result To convert temperature from Celsius to FahrenheitTo find Area and Perimeter of Square Swap Two Numbers find the smallest of two numbers
	G2	Create Flow chart and Algorithm for the following Addition of n numbers and display result To convert temperature from Celsius to FahrenheitTo find Area and Perimeter of Square Swap Two Numbers find the smallest of two numbers
12th	G1	Find whether given number is Even or Odd To print first n even Numbers find sum of series 1+2+3+…..+N print multiplication Table of a number generate first n Fibonacci terms 0,1,1,2,3,5…n (n>2)sum and average of given series of numbers
	G2	Find whether given number is Even or Odd To print first n even Numbers find sum of series 1+2+3+…..+N print multiplication Table of a number generate first n Fibonacci terms 0,1,1,2,3,5…n (n>2)sum and average of given series of numbers
13th	G1	Factorial of number n (n!=1x2x3x…n) Armstrong Number
	G2	Factorial of number n (n!=1x2x3x…n) Armstrong Number
14th	G1	Find whether given number is Prime or not
	G2	Find whether given number is Prime or not
15th	G1	Revision/Practice
	G2	Revision/Practice