

Lesson Plan

Name of the Faculty : Sh. Dinesh Singh
 Discipline : Computer Engg.
 Semester : 6th
 Subject : Network Security
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory		Practical	
	Lecture Day	Topic (including assignments /tests)	Practical Day	Topic
1 st Week	1 st	Introduction: Need for securing a network	1 st -G1	Installation and comparison of various anti virus software
	2 nd	Principles of Security	2 nd - G2	Installation and comparison of various anti virus software
	3 rd	Type of attacks		
Week 2	1 st	Introduction to cyber crime & cyber law-Indian Perspective (IT Act 2000 and amended 2008),	1 st -G1	Installation and study of various parameters of firewall.
	2 nd	Cyber ethics & ethical hacking	2 nd - G2	Installation and study of various parameters of firewall.
	3 rd	What is hacking? Attacker, phreaker etc.		
Week 3	1 st	Assignment on Cyber crime	1 st -G1	Practice
	2 nd	Securing Data over Internet: Introduction to basic encryption and decryption	2 nd - G2	Practice
	3 rd	Concept of symmetric and asymmetric key cryptography		
Week 4	1 st	Assignment on cryptography	1 st -G1	Practice of C language
	2 nd	Test	2 nd - G2	Practice of C language
	3 rd	Overview of DES, RSA and PGP		
Week 5	1 st	Introduction to Hashing: MD5, SSL	1 st -G1	Practice of C language
	2 nd	Introduction to Hashing: MD5, SSL, SSH, HTTPS,	2 nd - G2	Practice of C language
	3 rd	Digital Signatures, Digital certification		
Week 6	1 st	Digital Signatures, Digital certification, IPsec	1 st -G1	Writing program in C to Encrypt using XOR key.
	2 nd	Assignment on Hashing	2 nd - G2	Writing program in C to Encrypt using XOR key.
	3 rd	Test		
Week 7	1 st	Virus, Worms and Trojans: Introduction & Definition	1 st -G1	Writing program in C to Decrypt using XOR key.
	2 nd	preventive measures – access control	2 nd - G2	Writing program in C to Decrypt using XOR key.
	3 rd	checksum verification & process configuration		
Week 8	1 st	Assignment on Virus, Worms and Trojans	1 st -G1	Study of VPN.
	2 nd	Virus scanners & Heuristic scanners	2 nd - G2	Study of VPN.
	3 rd	Application level virus scanners		
Week 9	1 st	Deploying virus protection	1 st -G1	Study of VPN.
	2 nd	Assignment & Test	2 nd -G2	Study of VPN.
	3 rd	Firewalls: Definition and types of firewalls		
Week 10	1 st	Firewall configuration	1 st -G1	Practice
	2 nd	Limitations of firewall.	2 nd - G2	Practice
	3 rd	Assignment & Test		
Week 11	1 st	Intrusion Detection System (IDS) : Introduction & IDS limitations	1 st -G1	Study of various hacking tools.
	2 nd	Teardrop attacks, counter measures; Host based IDS set up	2 nd - G2	Study of various hacking tools.
	3 rd	Handling Cyber Assets- Configuration policy as per standards		
Week 12	1 st	Disposable policy	1 st -G1	Study of various hacking tools.
	2 nd	Virtual Private Network (VPN) : Basics, setting of VPN,	2 nd - G2	Study of various hacking tools.
	3 rd	VPN diagram & Configuration of required objects		
Week 13	1 st	Exchanging keys, modifying security policy	1 st -G1	Practice
	2 nd	Assignment	2 nd - G2	Practice
	3 rd	Test		

Week 14	1 st	Disaster and Recovery: Disaster categories	1 st -G1	Practical applications of digital signature.
	2 nd	Network disasters – cabling, topology		
	3 rd	Single point of failure, save configuration files	2 nd - G2	Practical applications of digital signature.
Week 15	1 st	Server disasters – UPS, RAID, Clustering	1 st -G1	Practice & Viva
	2 nd	Backups, server recovery		
	3 rd	Assignment & Test	2 nd - G2	Practice & Viva

Lesson Plan

Name of the Faculty : Sh. Dinesh Singh
 Discipline : Computer Engg.
 Semester : 6th
 Subject : Distributed Computing
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory	
	Lecture Day	Topic (including assignments /tests)
1 st Week	1 st	Cloud Computing :Overview of Cloud Computing
	2 nd	Overview of Cloud Computing
	3 rd	Characteristics of Cloud Computing
Week 2	1 st	Advantages of Cloud Computing
	2 nd	Assignment
	3 rd	Challenges of Cloud Computing
Week 3	1 st	Challenges of Cloud Computing
	2 nd	Applications of Cloud Computing
	3 rd	Applications of Cloud Computing
Week 4	1 st	Assignment
	2 nd	Test
	3 rd	Cloud Computing Service Models and deployment Models : Introduction
Week 5	1 st	Service Model- Saas
	2 nd	Service Model- Paas
	3 rd	Service Model- Laas
Week 6	1 st	Assignment
	2 nd	Deployment Models : Private Cloud
	3 rd	Deployment Models : Public Cloud
Week 7	1 st	Deployment Models : Hybrid Cloud
	2 nd	Deployment Models : Community Cloud
	3 rd	Assignment
Week 8	1 st	Test
	2 nd	Grid Computing :- Overview
	3 rd	Advantages
Week 9	1 st	Virtual Organizations
	2 nd	Virtual Organizations
	3 rd	Assignment
Week 10	1 st	Applications
	2 nd	Applications
	3 rd	Assignment
Week 11	1 st	Test
	2 nd	Other Technologies : Introduction
	3 rd	Cluster Computing
Week 12	1 st	Peer to Peer Networks
	2 nd	Utility Computing
	3 rd	Assignment
Week 13	1 st	Test
	2 nd	Utility Computing
	3 rd	Ubiquitous Computing -- Comparison of Grid,
Week 14	1 st	Assignment
	2 nd	Ubiquitous Computing -- Comparison of Grid
	3 rd	Ubiquitous Computing -- Comparison of Grid
Week 15	1 st	Cluster and Cloud Computing
	2 nd	Assignment
	3 rd	Revision & Test

Lesson Plan

Name of the Faculty : Mr Pankaj Malik
Discipline : Computer Engineering
Semester : VI
Subject : Programming In Java

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

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

Note: G1 and G2 are the respective Groups of students

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment/ Test)	Practical Day	Topic
1 st	1 st	Unit 1:Introduction to Java A brief history, how Java works?, Java Virtual Machine (JVM), Java In Time (JIT) compiler	1 st G1	1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50 b) Display the output which is given below: * * * * * *
	2 nd	Java features, using Java with other tools, native code, Java application types,	2 nd G2	1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50 b) Display the output which is given below: * * * * * *
	3 rd	comparison with C and C++		
2 nd	1 st	Unit 2: Working with data types, control flow statements	1 st	1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50 b) Display the output which is given below: * * * * * *
	2 nd	Arrays, casting	2 nd	1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50 b) Display the output which is given below: * * * * * *
	3 rd	command line arguments		
3 rd	1 st	Revision	1 st G1	c) Write a program which sorts an array of type integer d) Write a programme to determine the sum of the following harmonic series for a given value of n: $1+1/2+1/3+\dots+1/n$ the value of n should be given interactively through the keyboard
	2 nd	Revision	2 nd G2	c) Write a program which sorts an array of type integer d) Write a programme to determine the sum of the following harmonic series for a given value of n: $1+1/2+1/3+\dots+1/n$ the value of n should be given interactively through the keyboard
	3 rd	Unit 3: Java Classes and Memory management Introduction to Classes, inheritance		

4 th	1 st	Encapsulation and polymorphism	1 st G1	Write a programme to convert the given temperature in Fahrenheit to Celsius using the following conversion formula $C = F.32/1.8$ and display the value in a tabular form
	2 nd	Constructors and finalizers	2 nd G2	Write a programme to convert the given temperature in Fahrenheit to Celsius using the following conversion formula $C = F.32/1.8$ and display the value in a tabular form
	3 rd	Garbage collection, access specifier		
5 th	1 st	Revision	1 st G1	Write a programme to find all the numbers and sum of all integers greater than 100 less than 200 that are divisible by 7
	2 nd	Unit 4: Interfaces and Packages: Using Java interface	2 nd G2	Write a programme to find all the numbers and sum of all integers greater than 100 less than 200 that are divisible by 7
	3 rd	Using Java packages		
6 th	1 st	Revision	1 st G1	Given a list of marks ranging from 0 to 100, write a programme to compute and print the number of student should have obtained marks (a) in the range 81 to 100 (ii) in the range 61 to 80 (c) in the range 41 to 60 (d) in the range 0 to 40. The programme should use a minimum number of if statement
	2 nd	Unit 5: Exception Handling and stream files Over view of exception handling	2 nd G2	Given a list of marks ranging from 0 to 100, write a programme to compute and print the number of student should have obtained marks (a) in the range 81 to 100 (ii) in the range 61 to 80 (c) in the range 41 to 60 (d) in the range 0 to 40. The programme should use a minimum number of if statement
	3 rd	Method to use exception handling		
7 th	1 st	Method available to exceptions (The throw statement, the throws class, finally class),	1 st G1	Admission to a professional course is subject to the following conditions: a) Marks in mathematics ≥ 60 b) Marks in physics ≥ 50 c) Marks in chemistry ≥ 40 d) Total in all 3 subjects ≥ 200 (OR) Total in mathematics and physics ≥ 150 given the marks in the 3 subjects. Write the programme to process the application to list the eligible candidates
	2 nd	Creating your own exception classes	2 nd G2	Admission to a professional course is subject to the following conditions: a) Marks in mathematics ≥ 60 b) Marks in physics ≥ 50 c) Marks in chemistry ≥ 40
	3 rd	Revision		

				d) Total in all 3 subjects ≥ 200 (OR) Total in mathematics and physics ≥ 150 given the marks in the 3 subjects. Write the programme to process the application to list the eligible candidates
8 th	1 st	Unit 6:Threads and multi – threading Overview, thread basics – creating and running a thread,	1 st G1	The number in the sequence 1 1 2 3 5 8 13 21 Are called Fibonacci numbers. Write programme using a do while loop to calculate and print the first m fibonacci numbers (Hint: after the first 2 numbers in the series, each number is the sum of the 2 preceding the numbers)
	2 nd	The thread control methods	2 nd G2	The number in the sequence 1 1 2 3 5 8 13 21 Are called Fibonacci numbers. Write programme using a do while loop to calculate and print the first m fibonacci numbers (Hint: after the first 2 numbers in the series, each number is the sum of the 2 preceding the numbers)
	3 rd	The threads life cycle and synchronization		
9 th	1 st	Revision	1 st G2	Write a programme to evaluate the following investment equation $V=P(1+r)^n$ and print the tables which would give the value of V for various combination of the following values of P, r and n.
	2 nd	Revision	2 nd G2	Write a programme to evaluate the following investment equation $V=P(1+r)^n$ and print the tables which would give the value of V for various combination of the following values of P, r and n.
	3 rd	Unit 7. Introduction to Applet, Application and JDK Java applets Vs Java applications		
10 th	1 st	Building application with JDK	1 st G1	Write a program which will store the students roll no. names and total marks in the database
	2 nd	Building applets with JDK	2 nd G2	Write a program which will store the students roll no. names and total marks in the database
	3 rd	Building applets with JDK		
11 th	1 st	Building applets with JDK	1 st G1	Write a program which will display all those records whose marks are above 75%
	2 nd	Building applets with JDK	2 nd G2	Write a program which will display all those records whose marks are above 75%
	3 rd	HTML for Java applets		
12 th	1 st	HTML for Java applets	1 st G1	Write a program to draw the following using Applet:
	2 nd	HTML for Java applets	2 nd G2	Write a program to draw the following using Applet:
	3 rd	HTML for Java applets		
13 th	1 st	Managing input	1 st G1	Exercises on implementing Java Classes.

	2 nd	Managing input	2 nd G2	Exercises on implementing Java Classes.
	3 rd	Managing input		
14 th	1 st	Managing input	1 st G1	Exercises on exceptional handling
	2 nd	Managing input	2 nd G2	Exercises on exceptional handling
	3 rd	Revision		
15 th	1 st	Revision	1 st G1	Exercises on creating and running threads
	2 nd	Revision	2 nd G2	Exercises on creating and running threads
	3 rd	Revision		

Lesson Plan

Name of the Faculty : Smt. Poonam Dahiya
 Discipline : Computer Engg.
 Semester : 4th
 Subject : DBMS
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory		Practical	
	Lecture Day	Topic (including assignments /tests)	Practical Day	Topic
1 st Week	1 st	Database Systems : Introduction to Database and its purpose & Database System	1 st -G1	Overview, Features and functionality
	2 nd	Why Database & History of Database System	2 nd - G2	Overview, Features and functionality
	3 rd	Characteristics of the database approach & Advantages and disadvantages of database systems		
Week 2	1 st	Introduction to Conventional File System & Concept of files, record, data, information retrieval Comparison between Conventional System and DataBase System	1 st -G1	Application development in MS-Access
	2 nd	Classification of DBMS Users - Actors on the scene & Database Administrators, Database Designers, End Users, System Analysts and Application Programmers	2 nd - G2	Application development in MS-Access
	3 rd	Workers behind the scene (DBMS system designers and implementers, tool developers, operator and maintenance personnel) History of data base System		
Week 3	1 st	Assignment on Database system	1 st -G1	Exercises on different forms of select statement
	2 nd	Test	2 nd - G2	
	3 rd	Data models: (Physical Model, Object based Model, Record based Model Network Model, Heirachical Model)		Exercises on different forms of select statement
Week 4	1 st	Schemas, sub schemas instances, data base state. Case Study of models and schemas (examples student information System)	1 st -G1	Exercises on altering of Tables
	2 nd	DBMS Architecture: Three Level of Architecures	2 nd - G2	
	3 rd	Data base Administrator and Administration, Database Management System – Advantage and Disadvantage, Classification of DBMS, DBMS Interfaces		Exercises on altering of Tables
Week 5	1 st	Concept of centralized and Client /Server Architecture for DBMS: Single Tier, Two Tier and Three Tier	1 st -G1	Exercises on dropping of Tables
	2 nd	Data Independence Logical data Independence , Physical data Independence	2 nd - G2	
	3 rd	Database Languages and Interfaces DBMS Language & DBMS Interfaces		Exercises on dropping of Tables
Week 6	1 st	Classification of Database Management Systems: Centralized, Distributed, parallel and Object based	1 st -G1	Exercises on creation of tables
	2 nd	Assignment on Database Architecture	2 nd - G2	
	3 rd	Test		Exercises on creation of tables
Week 7	1 st	Data Modeling using E.R. Model: Data Modeling using E.R. Model (Entity Relationship Model)	1 st -G1	Exercises on insertion of data into tables
	2 nd	Data Models Classification : File based or primitive models, traditional data models, semantic data models	2 nd - G2	
	3 rd	Entities and Attributes		Exercises on insertion of data into tables
Week 8	1 st	Entity types and Entity sets	1 st -G1	Exercises on deletion of data
	2 nd	Key attribute and domain of attributes		

	3 rd	Relationship among entities	2 nd - G2	Exercises on deletion of data
Week 9	1 st	Database design with E/R model	1 st -G1	Exercises on deletion of data using different conditions
	2 nd	ER Design Issues		
	3 rd	Mapping Constraints	2 nd -G2	Exercises on deletion of data using different conditions
Week 10	1 st	Assignment on Entity Relationship Model	1 st -G1	Exercises on UPDATE statement
	2 nd	Test		
	3 rd	Relational Model Concepts: Domain, Attributes, Tuples	2 nd - G2	Exercises on UPDATE statement
Week 11	1 st	Cardinality Keys- Primary, Secondary	1 st -G1	Exercise on structured query Language
	2 nd	foreign, Alternative Keys etc and Relations		
	3 rd	Assignment on Relational Model	2 nd - G2	Exercise on structured query Language
Week 12	1 st	Test	1 st -G1	Exercise on Select Command with where clause
	2 nd	Structured Query Language – Data definition language : Create Command		
	3 rd	Data definition language : Alter & Drop commands	2 nd - G2	Exercise on Select Command with where clause
Week 13	1 st	Data Manipulation Language (DML)	1 st -G1	Exercise on Select Command using conditional expressions and Boolean operator
	2 nd	Select command with where clause using conditional expressions		
	3 rd	Boolean operators	2 nd - G2	Exercise on Select Command using conditional expressions and Boolean operator
Week 14	1 st	Group by clause & like operator	1 st -G1	Exercise on Select Command with group by clause and Like operator
	2 nd	Insert Command		
	3 rd	Update and Delete commands	2 nd - G2	Exercise on Select Command with group by clause and Like operator
Week 15	1 st	Assignment on DDL	1 st -G1	Practice exercises on MS Access and SQL
	2 nd	Assignment on DML		
	3 rd	Test	2 nd - G2	Practice exercises on MS Access and SQL

Lesson Plan

Name of the Faculty : Smt. Poonam Dahiya
 Discipline : Computer Engg.
 Semester : 2nd
 Subject : Desktop Publishing
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Practical	
	Practical Day	Topic
1st Week	1 st G-1	Overview of Desktop Publishing (DTP)/ Page Maker /Publisher/Scribus
	2 nd G-2	Overview of Desktop Publishing (DTP)/ Page Maker /Publisher/Scribus
	3 rd G-1	Using windows explorer and other windows elements & Creating and opening a document in page maker/publisher/scribus
	4 th G-2	Using windows explorer and other windows elements & Creating and opening a document in page maker/publisher/scribus
Week 2	1 st G-1	Formatting and editing a document & Saving and printing a given document
	2 nd G-2	Formatting and editing a document & Saving and printing a given document
	3 rd G-1	Insertion of text and graphics in a given document from external source
	4 th G-2	Insertion of text and graphics in a given document from external source
Week 3	1 st G-1	Using columns utility, to give the document column look & Using various fonts and styles to make a document more beautiful
	2 nd G-2	Using columns utility, to give the document column look & Using various fonts and styles to make a document more beautiful
	3 rd G-1	Practice
	4 th G-2	Practice
Week 4	1 st G-1	Use of page maker to make transparencies
	2 nd G-2	Use of page maker to make transparencies
	3 rd G-1	Formatting a given file by using undo/redo, repeat, cut, copy, paste, delete, duplicate and clone utilities
	4 th G-2	Formatting a given file by using undo/redo, repeat, cut, copy, paste, delete, duplicate and clone utilities
Week 5	1 st G-1	Inserting objects in the drawing, aligning, ordering, grouping and ungrouping of those objects
	2 nd G-2	Inserting objects in the drawing, aligning, ordering, grouping and ungrouping of those objects
	3 rd G-1	Use of combine, break apart, weld, intersection, trim and separate tools in a given drawing
	4 th G-2	Use of combine, break apart, weld, intersection, trim and separate tools in a given drawing
Week 6	1 st G-1	Practice
	2 nd G-2	Practice
	3 rd G-1	VIVA
	4 th G-2	Viva
Week 7	1 st G-1	Introduction - exploring Corel Draw screen - using dialog boxes, using roll ups, create/open file, save file -, import/export files, print file
	2 nd G-2	Introduction - exploring Corel Draw screen using dialog boxes, using roll ups, create/open file, save file, import/export files, print file
	3 rd G-1	Use of ribbon bar, use of tool box, select object, shaping objects using zoom tool
	4 th	Use of ribbon bar, use of tool box, select object, shaping objects using zoom tool
Week 8	1 st G-1	filling objects, outline objects, use of line tool ☑ Setting up new drawing, setting multi-page document, undo/redo mistakes, repeat, cut, copy, paste, delete, duplicate, clone
	2 nd G-2	filling objects, outline objects, use of line tool ☑ Setting up new drawing, setting multi-page document, undo/redo mistakes, repeat, cut, copy, paste, delete, duplicate, clone
	3 rd G-1	Insert object, paste special, copy attributes from select all, drawing objects, selecting objects ☑ Page setup, insert/delete page, use of layers, roll up, grid and scale set up, guideline set up
	4 th	Insert object, paste special, copy attributes from select all, drawing

	G-2	objects, selecting objects ☑ Page setup, insert/delete page, use of layers, roll up, grid and scale set up, guideline set up
Week 9	1 st G-1	Practice
	2 nd G-2	Practice
	3 rd G-1	Use of mode edit tools i.e. to line, to curve, to stretch, and rotate
	4 th G-2	Use of mode edit tools i.e. to line, to curve, to stretch, and rotate
Week 10	1 st G-1	Creating special effects i.e. transform roll-up, envelop roll up,
	2 nd G-2	Creating special effects i.e. transform roll-up, envelop roll up,
	3 rd G-1	Creating special effects i.e. add perspective, extrude roll up, contour roll up
	4 th G-2	Creating special effects i.e. add perspective, extrude roll up, contour roll up
Week 11	1 st G-1	Creating special effects i.e. power line, power clip, clear effects
	2 nd G-2	Creating special effects i.e. power line, power clip, clear effects
	3 rd G-1	Practice & VIVA
	4 th G-2	Practice & VIVA
Week 12	1 st G-1	To insert character and paragraph text in a drawing and frame
	2 nd G-2	To insert character and paragraph text in a drawing and frame
	3 rd G-1	Setting of tabs, indents, bullets and spacing in paragraph text
	4 th G-2	Setting of tabs, indents, bullets and spacing in paragraph text
Week 13	1 st G-1	Filling of text to a given path, aligning it to base line, straighten text and edit text
	2 nd G-2	Filling of text to a given path, aligning it to base line, straighten text and edit text
	3 rd G-1	Practice
	4 th G-2	Practice
Week 14	1 st G-1	Using tools such as spell checker, and thesaurus
	2 nd G-2	Using tools such as spell checker, and thesaurus
	3 rd G-1	Using find and replace text utility and type assist
	4 th G-2	Using find and replace text utility and type assist
Week 15	1 st G-1	Adding various symbols to a drawing and creating different patterns.
	2 nd G-2	Adding various symbols to a drawing and creating different patterns.
	3 rd G-1	Practice & VIVA
	4 th G-2	Practice & VIVA

Lesson Plan

Name of the Faculty : Smt. Renu Kandra
 Discipline : Computer Engg.
 Semester : 6th
 Subject : EDM
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory	
	Lecture Day	Topic (including assignments /tests)
1 st Week	1 st	Concept /Meaning and its need of Entrepreneurship
	2 nd	Qualities and functions of entrepreneur
	3 rd	Barriers in entrepreneurship
Week 2	1 st	Sole proprietorship and partnership forms of business organisations
	2 nd	Schemes of assistance by entrepreneurial support agencies at National, State, KVIB,
	3 rd	District level: NSIC
Week 3	1 st	District level: NRDC & DC:MSME
	2 nd	District level: SIDBI & NABARD,
	3 rd	District level: Commercial Banks, SFC's TCO, KVIB, &DIC
Week 4	1 st	Technology Business Incubator (TBI) and Science and Technology Entrepreneur Parks (STEP).
	2 nd	Assignment on Entrepreneurship
	3 rd	Test
Week 5	1 st	Market Survey and Opportunity Identification
	2 nd	Scanning of business environment
	3 rd	Salient features of National and State industrial policies and resultant business opportunities
Week 6	1 st	Types and conduct of market survey
	2 nd	Assessment of demand and supply in potential areas of growth
	3 rd	Identifying business opportunity
Week 7	1 st	Considerations in product selection
	2 nd	Assignment on Market Survey
	3 rd	Test
Week 8	1 st	Project report Preparation
	2 nd	Preliminary project report
	3 rd	Detailed project report including technical & economic feasibility
Week 9	1 st	Detailed project report including market feasibility
	2 nd	Common errors in project report preparations
	3 rd	Exercises on preparation of project report
Week 10	1 st	Assignment on project report
	2 nd	Test
	3 rd	Introduction to Management: Definitions and importance of management
Week 11	1 st	Functions of management: Importance and Process of planning, organising, staffing, directing and controlling
	2 nd	Principles of management (Henri Fayol, F.W. Taylor) Concept and structure of an organisation Types of industrial organisations : a) Line organisation b) Line and staff organisation c) Functional Organisation
	3 rd	Test
Week 12	1 st	Leadership Definition and Need Qualities and functions of a leader Manager Vs leader Types of leadership
	2 nd	Motivation : Definitions and characteristics Factors affecting motivation Theories of motivation (Maslow, Herzberg, McGregor)
	3 rd	Assignment on Leadership & Motivation
Week 13	1 st	Test
	2 nd	Management Scope in Different Areas : Human Resource Management Introduction and objective Introduction to Man power planning, recruitment and selection Introduction to performance appraisal methods
	3 rd	Material and Store Management Introduction functions, and objectives ABC Analysis and EOQ
Week 14	1 st	Marketing and sales

		Introduction, importance, and its functions Physical distribution Introduction to promotion mix Sales promotion
	2 nd	Financial Management Introductions, importance and its functions Elementary knowledge of income tax, sales tax, excise duty, custom duty and VAT
	3 rd	Assignment on Management Scope in Different Areas
Week 15	1 st	Miscellaneous Topics : Customer Relation Management (CRM) & Definition and need ☐ Types of CRM
	2 nd	Total Quality Management (TQM) Statistical process control Total employees Involvement Just in time (JIT)
	3 rd	Intellectual Property Right (IPR): Introductions, definition and its importance Infringement related to patents, copy right, trade mark

Lesson Plan

Name of the Faculty : Smt. Renu Kandara

Discipline : Computer Engg.

Semester : 4th

Subject : CO

Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory	
	Lecture Day	Topic (including assignments /tests)
1 st Week	1 st	Hardware organisation of computer system Basic Principle: Basic about Computer System
	2 nd	CPU organization : general register organisation
	3 rd	Stack organization
	4 th	Instruction formats : Introduction
Week 2	1 st	three address, two address,
	2 nd	one address, zero address
	3 rd	RISC instruction
	4 th	Addressing modes: Immediate, register
Week 3	1 st	Direct, in direct,.
	2 nd	relative, indexed
	3 rd	CPU Design: Microprogrammed vs hard wired control.
	4 th	CPU Design: Microprogrammed vs hard wired control.
Week 4	1 st	Reduced instruction set computers Reduced instruction set computers
	2 nd	Reduced instruction set computers Reduced instruction set computers
	3 rd	CISC characteristics
	4 th	RISC characteristics,
Week 5	1 st	Comparison between CISC & RISC
	2 nd	Assignment on CPU Organization
	3 rd	Assignment on CPU Design
	4 th	Discussion on unit 1
Week 6	1 st	Memory organization: Basics About Memory
	2 nd	Memory Hierarchy
	3 rd	RAM and ROM chips
	4 th	Memory address map
Week 7	1 st	Memory connections to CPU
	2 nd	Auxillary memory : Magnetic disks
	3 rd	Auxillary memory : magnetic tapes
	4 th	Associative memory
Week 8	1 st	Cache memory
	2 nd	Virtual memory
	3 rd	Memory management hardware
	4 th	Assignment on Memory Hierarchy
Week 9	1 st	Assignment on Auxillary memory
	2 nd	Test
	3 rd	I/O organization: Basis Input output system(BIOS)
	4 th	Function of BIOS
Week 10	1 st	Testing and initialization
	2 nd	Configuring the system
	3 rd	Assignment on BIOS
	4 th	Modes of Data Transfer
Week 11	1 st	Programmed I/O
	2 nd	Synchronous, asynchronous and interrupt initiated
	3 rd	Synchronous, asynchronous and interrupt initiated
	4 th	DMA data transfer
Week 12	1 st	Assignment on modes of Data Transfer
	2 nd	Test
	3 rd	Architecture of multi processor systems : Introduction about Multi processor systems
	4 th	Architecture of multi processor systems
Week 13	1 st	Forms of parallel processing
	2 nd	Parallel processing and pipelines
	3 rd	Basic characteristics of multiprocessor
	4 th	Assignment on multiprocessor System
Week 14	1 st	General purpose multiprocessors'
	2 nd	Interconnection networks : time shared common bus
	3 rd	multi port memory
	4 th	cross bar switch
Week 15	1 st	multi stage switching networks and hyper cube structures
	2 nd	multi stage switching networks and hyper cube structures

	3 rd	Assignment on Interconnection networks
	4 th	Test

Lesson Plan

Name of the Faculty : Smt. Renu Kandara
 Discipline : Computer Engg.
 Semester : 2nd
 Subject : Computer Workshop
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Practical	
	Practical Day	Topic
1 st Week	1 st G-1	Part-A (Hardware): Identify various computer components & Define various parts of computer.
	2 nd G-2	Part-A (Hardware): Identify various computer components & Define various parts of computer.
	3 rd G-1	Describe and differentiate various Motherboard Processors, RAM, Secondary storage devices
	4 th G-2	Describe and differentiate various Motherboard Processors, RAM, Secondary storage devices
Week 2	1 st G-1	Install various components of computer & Maintain and repair (troubleshoot) various computer components.
	2 nd G-2	Install various components of computer & Maintain and repair (troubleshoot) various computer components.
	3 rd G-1	Serial and parallel ports, inkjet, USB Ports, SATA Fire wire
	4 th G-2	Serial and parallel ports, inkjet, USB Ports, SATA Fire wire
Week 3	1 st G-1	Bluetooth, Modems, connectors and cables
	2 nd G-2	Bluetooth, Modems, connectors and cables
	3 rd G-1	Dot matrix and Laser printers
	4 th G-2	Dot matrix and Laser printers
Week 4	1 st G-1	Assemble and de-assemble computer system.
	2 nd G-2	Assemble and de-assemble computer system.
	3 rd G-1	Identify various cables used for connection
	4 th G-2	Identify various cables used for connection
Week 5	1 st G-1	Practice
	2 nd G-2	Practice
	3 rd G-1	VIVA
	4 th G-2	VIVA
Week 6	1 st G-1	Introduction to Free and Open-Source Software
	2 nd G-2	Introduction to Free and Open-Source Software
	3 rd G-1	Install operating system MS-Window
	4 th G-2	Install operating system MS-Window
Week 7	1 st G-1	Install operating system Linux.
	2 nd G-2	Install operating system Linux.
	3 rd G-1	Diagnose the various faults in computer system i.e. SMPS
	4 th G-2	Diagnose the various faults in computer system i.e. SMPS
Week 8	1 st G-1	Diagnose the various faults in computer system i.e. HDD, RAM.
	2 nd G-2	Diagnose the various faults in computer system i.e. HDD, RAM.
	3 rd	Installation of latest version of application software MS-Office/open office .

	G-1	
	4 th G-2	Installation of latest version of application software like MS-Office/open office .
Week 9	1 st G-1	Practice
	2 nd G-2	Practice
	3 rd G-1	Installation of latest version of application software proprietary/free like Adobe Photoshop, Corel Draw
	4 th G-2	Installation of latest version of application software proprietary/free like Adobe Photoshop, Corel Draw
Week 10	1 st G-1	Installation of latest version of application software proprietary/free like Macromedia Flash etc.
	2 nd G-2	Installation of latest version of application software proprietary/free like Macromedia Flash etc.
	3 rd G-1	Viva
	4 th G-2	Viva
Week 11	1 st G-1	Installation and configuration of latest version of database software like Oracle/MySQL/ SQL Server etc
	2 nd G-2	Installation and configuration of latest version of database software like Oracle/MySQL/ SQL Server etc
	3 rd G-1	Installation and configuration of latest version of database software like Oracle/MySQL/ SQL Server etc
	4 th G-2	Installation and configuration of latest version of database software like Oracle/MySQL/ SQL Server etc
Week 12	1 st G-1	Introduction to Virus/Spyware/Worm/Trojan Horse
	2 nd G-2	Introduction to Virus/Spyware/Worm/Trojan Horse
	3 rd G-1	Introduction to Virus/Spyware/Worm/Trojan Horse & their detection
	4 th G-2	Introduction to Virus/Spyware/Worm/Trojan Horse & their detection
Week 13	1 st G-1	Introduction to Virus/Spyware/Worm/Trojan Horse , their detection, prevention and cure
	2 nd G-2	Introduction to Virus/Spyware/Worm/Trojan Horse , their detection, prevention and cure
	3 rd G-1	Installation, uninstallation and use of Antivirus software
	4 th G-2	Installation, uninstallation and use of Antivirus software
Week 14	1 st G-1	Practice
	2 nd G-2	Practice
	3 rd G-1	Viva
	4 th G-2	Viva
Week 15	1 st G-1	Visit to computer manufacturing industry
	2 nd G-2	Visit to computer manufacturing industry
	3 rd G-1	Workshop exercise
	4 th G-2	Workshop exercise

Lesson Plan

Name of the Faculty : Sh. Virender Singh
 Discipline : Computer Engg.
 Semester : 4th
 Subject : Data Structure using C
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory		Practical	
	Lecture Day	Topic (including assignments /tests)	Practical Day	Topic
1 st Week	1 st	Problem solving concept , Top-down and bottom-up design, structured programming	1 st – G1	Exercise of C Programme
	2 nd	Concept of data type, variables and constants	2 nd - G2	
	3 rd	Introduction to data Structure(Linear, Non Linear, Primitive, Non Primitive))		
Week 2	1 st	Concept of Data Structure (Array, Linked List, Stack, Queue, Trees, Graphs)	1 st – G1	Exercise of C Programme
	2 nd	Concept of Arrays	2 nd - G2	
	3 rd	One dimensional Array, Two Dimensional Array: Representation of Two dimensional Array (Base address, LB, UB)		
Week 3	1 st	Operational on Arrays with Algorithms (inserting, deleting)	1 st – G1	Programme regarding Array
	2 nd	Operational on Arrays with Algorithms (Searching, Traversing		
	3 rd	Introduction to linked list and double linked list, Representation of Linked list in Memory	2 nd - G2	
Week 4	1 st	Describe and Comparison between Linked list and Array	1 st – G1	Programme of Matrices
	2 nd	Traversing and Searching Linked List		
	3 rd	Insertion and deletion into Linked list	2 nd - G2	
Week 5	1 st	Application of Linked List and Explain Doubly Linked List	1 st – G1	Programme of addition of two Matrices using function
	2 nd	Traversing, Insertion and deletion into doubly Linked List		
	3 rd	Introduction to Stack, Representation of Stacks With Array and Linked list	2 nd - G2	
Week 6	1 st	Implementation of Stacks	1 st – G1	Programme of inserting and deleting elements in array
	2 nd	Application of stack (Polish Notation, Converting Infix to Post Fix Notation)		
	3 rd	Evaluation of Post fix Notation and Tower of Hanoi	2 nd - G2	
Week 7	1 st	Recursion : Concept and Comparison between recursion and Iteration	1 st – G1	Programme of Push and POP Operation in stack
	2 nd	Introduction of Queues and Implementation of queues (array and Linked list with algorithm)		
	3 rd	Introduction of Queues and Implementation of queues (array and Linked list with algorithm)	2 nd - G2	
Week 8	1 st	Explain Circular Queues and De-Queues	1 st – G1	Programme of Conversion from in-fix notation
	2 nd	Introduction of Trees and Concept of Binary Trees		
	3 rd	Explain Complete and Extended Binary Tree	2 nd - G2	
Week 9	1 st	Concept of representation of Binary Tree	1 st – G1	Programme of the Factorial of given number using recursion
	2 nd	Concept of representation of balanced Binary Tree		

	3 rd	Explain Traversing Binary Trees (Pre Order, Post Order and In Order)	2 nd - G2	Programme of the Factorial of given number using recursion
Week 10	1 st	Explain Searching, inserting and deleting in binary seary trees	1 st – G1	Insertion and Deletion of elements in Queue and Circular Queue using Pointer
	2 nd	Explain Searching, inserting and deleting in binary seary trees		
	3 rd	Problems Solution	2 nd - G2	Insertion and Deletion of elements in Queue and Circular Queue using Pointer
Week 11	1 st	Test	1 st – G1	Insertion and Deletion of elements in Linked List and doubly Linked list
	2 nd	Problems Solution		
	3 rd	Previous topic Explain	2 nd - G2	Insertion and Deletion of elements in Linked List and doubly Linked list
Week 12	1 st	Introduction of Sorting and Searching	1 st – G1	Programme of Linear Search procedures to search an element in given list
	2 nd	Search algorithm(Linear and Binary)		
	3 rd	Search algorithm(Linear and Binary)	2 nd - G2	Programme of Binary Search procedures to search an element in given list
Week 13	1 st	Concept and uses of Sorting	1 st – G1	Previous Problems solution
	2 nd	Sorting Algorithm (Bubble sort)		
	3 rd	Sorting Algorithm (Insertion sort)	2 nd - G2	Previous Problems solution
Week 14	1 st	Sorting Algorithm (Selection sort)	1 st – G1	Programme of Bubble Sort
	2 nd	Sorting Algorithm (Merge Sort)		
	3 rd	Sorting Algorithm (Radix sort) & Sorting Algorithm (Heap Sort)	2 nd - G2	Programme of Bubble Sort
Week 15	1 st	Problems Solution	1 st – G1	Programme of Selection Sort
	2 nd	Problems solution		
	3 rd	Test	2 nd - G2	Programme of Selection Sort

Lesson Plan

Name of the Faculty : Smt. Garima Rohela
 Discipline : Computer Engg.
 Semester : 4th
 Subject : MPD
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory		Practical	
	Lecture Day	Topic (including assignments /tests)	Practical Day	Topic
1 st Week	1 st	Evolution of Microprocessor : Typical organization of a microcomputer system and functions of its various blocks.	1 st – G1	Familiarization of different keys of 8085 microprocessor kit and its memory map
	2 nd	Microprocessor, its evolution & function	2 nd - G2	
	3 rd	Its impact on modern society		
	4 th	Assignment on organization of microcomputer & Test		
Week 2	1 st	Architecture of a Microprocessor : Concept of Bus, bus organization of 8085	1 st – G1	Steps to enter, modify data/program and to execute a programme on 8085 kit
	2 nd	Functional block diagram of 8085	2 nd - G2	
	3 rd	function of each block		
	4 th	Pin details of 8085		
Week 3	1 st	Pin details of 8085 and related signals,	1 st – G1	Writing and execution of ALP for addition and sub station of two 8 bit numbers
	2 nd	Demultiplexing of address/data bus	2 nd - G2	
	3 rd	Generation of read/write control signals		
	4 th	Steps to execute a stored Programme		
Week 4	1 st	Revision of Functional block diagram of 8085	1 st – G1	Writing and execution of ALP for multiplication
	2 nd	Revision of Pin diagram	2 nd - G2	
	3 rd	Revision of Pin details		
	4 th	Test		
Week 5	1 st	Instruction Timing and Cycles : Instruction cycle, machine cycle and T-states	1 st – G1	Writing and execution of ALP for division of two 8 bit numbers
	2 nd	Fetch and execute cycle	2 nd - G2	
	3 rd	Revision & Test		
	4 th	Programming (with respect to 8085 microprocessor) : Brief idea of machine and assembly languages		
Week 6	1 st	Machines and Mnemonic codes	1 st – G1	Writing and execution of ALP for arranging 10 numbers in ascending order
	2 nd	Instruction format and Addressing mode	2 nd - G2	
	3 rd	Identification of instructions as to which addressing mode they belong.		
	4 th	Concept of Instruction set. Explanation of the instructions of the following groups of instruction set		
Week 7	1 st	Data transfer instructions	1 st – G1	Writing and execution of ALP for arranging 10 numbers in descending order
	2 nd	Arithmetic instructions	2 nd - G2	
	3 rd	Arithmetic instructions		
	4 th	Logical Instructions		
Week 8	1 st	Logical Instructions	1 st – G1	Writing and execution of ALP for 0 to 9 BCD counters (up/down counter according to choice stored in memory)
	2 nd	Stack related instructions	2 nd - G2	
	3 rd	Machine Control Group		
	4 th	Programming exercises in assembly language.		
Week 9	1 st	Programming exercises in assembly	1 st – G1	Interfacing exercise on 8255 like

		language.		LED display control
	2 nd	Assignment on Assembly Language Programming		
	3 rd	Revision & Test	2 nd - G2	Interfacing exercise on 8255 like LED display control
	4 th	Memories and I/O interfacing : Concept of memory mapping		
Week 10	1 st	Partitioning of total memory space	1 st – G1	Interfacing exercise on 8253 programmable interval timer
	2 nd	Address decoding		
	3 rd	Address decoding	2 nd - G2	Interfacing exercise on 8253 programmable interval timer
	4 th	concept of peripheral mapped I/O and memory mapped I/O		
Week 11	1 st	Interfacing of memory mapped I/O devices.	1 st – G1	Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
	2 nd	Interfacing of memory mapped I/O devices.		
	3 rd	Assignment on Memory Mapping with different examples	2 nd - G2	Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
	4 th	Test		
Week 12	1 st	Interrupts : Concept of interrupt	1 st – G1	Use of 8085 emulator for hardware testing
	2 nd	Maskable and non-maskable		
	3 rd	Edge triggered and level triggered Interrupts	2 nd - G2	Use of 8085 emulator for hardware testing
	4 th	Software interrupt & Various hardware interrupts of 8085		
Week 13	1 st	Restart interrupts and its use	1 st – G1	Writing and execution of ALP for 1's & 2's complement of an 8 bit number
	2 nd	Servicing interrupts		
	3 rd	extending interrupt system	2 nd - G2	Writing and execution of ALP for 1's & 2's complement of an 8 bit number
	4 th	Data Transfer Techniques : Concept of programmed I/O operations		
Week 14	1 st	sync data transfer, async data transfer (hand shaking)	1 st – G1	Writing and execution of ALP shift left & right of an 8 bit number by 1bit
	2 nd	Interrupt driven data transfer & DMA		
	3 rd	Serial output data & Serial input data	2 nd - G2	Writing and execution of ALP shift left & right of an 8 bit number by 1bit
	4 th	Peripheral devices : 8255 PPI		
Week 15	1 st	8253 PIT	1 st – G1	Addition and subtraction of two 16-bit numbers
	2 nd	8257 / 8237 DMA controller		
	3 rd	8279 Programmable KB/Display Interface	2 nd - G2	Addition and subtraction of two 16-bit numbers
	4 th	8251 Communication Interface Adapter		

Lesson Plan

Name of the Faculty : Sh. Virender Nandal & Sh. Harish Kumar Kaushik
 Discipline : Computer Engg.
 Semester : 6th
 Subject : Project
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Practical	
	Practical Day	Topic
1 st Week	1 st -G1	Selection of Project
	2 nd - G2	Selection of Project
Week 2	1 st -G1	Finalization of Project
	2 nd - G2	Finalization of Project
Week 3	1 st -G1	Outline of Project
	2 nd - G2	Outline of Project
Week 4	1 st -G1	Planning of Project
	2 nd - G2	Planning of Project
Week 5	1 st -G1	Execution of Project
	2 nd - G2	Execution of Project
Week 6	1 st -G1	Execution of Project
	2 nd - G2	Execution of Project
Week 7	1 st -G1	Execution of Project
	2 nd - G2	Execution of Project
Week 8	1 st -G1	Execution of Project
	2 nd - G2	Execution of Project
Week 9	1 st -G	Execution of Project
	2 nd -G2	Execution of Project
Week 10	1 st -G1	Providing Solution of Problems
	2 nd - G2	Providing Solution of Problems
Week 11	1 st -G1	Production of Final Executed project
	2 nd - G2	Production of Final Executed project
Week 12	1 st -G1	Checking of Final Project
	2 nd - G2	Checking of Final Project
Week 13	1 st -G1	Report writing
	2 nd - G2	Report writing
Week 14	1 st -G1	Seminar
	2 nd - G2	Seminar
Week 15	1 st -G1	Viva-Voce
	2 nd - G2	Viva-Voce

Lesson Plan

Name of the Faculty : Mr Harish Kumar Kaushik

Discipline : Computer Engineering

Semester : IV

Subject : OBJECT ORIENTED PROGRAMMING USING C++

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

Work Load (Lecture /Practical) per week (in hours): Lectures – 03, Practical – 06)

Note: G1 and G2 are the respective Groups of students

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment/ Test)	Practical Day	Topic
1 st	1 st	Unit 1: Introduction and Features 1 Fundamentals of object oriented programming – procedure oriented programming Vs. object oriented programming (OOP)	1 st (G1)	Write a function using variables as arguments to swap the values of a pair of integers
	2 nd	Object oriented programming concepts – Classes, reusability, encapsulation, inheritance, polymorphism, dynamic binding, message passing, Data Hiding	2 nd (G2)	Write a function using variables as arguments to swap the values of a pair of integers
	3 rd	Benefits of OOPs and its Application	3 rd (G1)	Consider a shopping list of items for which we place an order with a dealer every month. The list includes such as the code number and price of each item .we would like to perform operations such as adding an item to the list, deleting an item from the list and printing the total value of the order.
			4 th (G2)	Consider a shopping list of items for which we place an order with a dealer every month. The list includes such as the code number and price of each item .we would like to perform operations such as adding an item to the list, deleting an item from the list and printing the total value of the order.
2 nd	1 st	Unit 2: Language Constructs Review of constructs of C used in C++: variables, types and type declarations, user defined data types	1 st (G1)	1. Write a program to read name, roll no ,internal external marks using classes and display the same on the screen.
	2 nd	increment and decrement operators, relational and logical operators	2 nd (G2)	1. Write a program to read name, roll no ,internal external marks using classes and display the same on the screen.
	3 rd	if then else clause; conditional expressions, input and output statement	3 rd (G1)	Write a program of swapping of numbers by accessing private numbers using friend function.
			4 th (G2)	Write a program of swapping of numbers by accessing private numbers using friend function.
3 rd	1 st	loops, switch case, arrays, structure, unions, functions, pointers; preprocessor directives and Header Files	1 st (G1)	Define a class to represent a bank account using constructor including the following members:- Data members i) For Single Customer ii) For n Customers a) Name of the depositors b) Account number c) Type of account d) Balance amount in the account Member function - To assign initial values - To deposit an amount - To withdraw an amount after checking the balance - To display the name and balance.

	2nd	Scope Resolution Operator Managing Console I/O Operations; C++ Stream	2nd (G2)	Define a class to represent a bank account using constructor including the following members:- Data members i) For Single Customer ii) For n Customers a) Name of the depositors b) Account number c) Type of account d) Balance amount in the account Member function - To assign initial values - To deposit an amount - To withdraw an amount after checking the balance - To display the name and balance.
	3rd	Unformatted and Formatted Console I/O	3rd (G1)	Create 2 classes OM and DB which store the value of distance. DM store distances in Meters and cm and DB in feet and inches. Write a program that can read values for the class objects and add 1 object OM with another object of DB. Use a friend function to carry out the addition operation the object that stores the results may be a DM object or a DB object, depending upon the units in which the results are required. The display should be in the format of feet and inches or meters and cms depending on the object on display.
			4th (G2)	Create 2 classes OM and DB which store the value of distance. DM store distances in Meters and cm and DB in feet and inches. Write a program that can read values for the class objects and add 1 object OM with another object of DB. Use a friend function to carry out the addition operation the object that stores the results may be a DM object or a DB object, depending upon the units in which the results are required. The display should be in the format of feet and inches or meters and cms depending on the object on display.
4th	1st	Revision of Unit 1 and Unit 2	1st (G1)	A book shop maintains the inventory of books that are being sold at the shop the list includes details such as author, title and publisher and stock position. Whenever a customer wants the book, the sales person inputs the title and author and the system search the list and display whether it is available or not. If it is not, a appropriate message is displayed, if it is, then the system displays the book details and requests for the number of copies require. If the requested are available, the total cost of the required copies is displayed: otherwise the message" Required copies not in stock"is displayed. Design a system using a class called books with suitable member functions and constructors. Use new operator in constructor to allocate memory space require.
	2nd	Unit 3: Classes and Objects Creation, accessing class members, Private Vs Public	2nd (G2)	A book shop maintains the inventory of books that are being sold at the shop the list includes details such as author, title and publisher and stock position. Whenever a customer wants the book, the sales person inputs the title and author and the system search the list and display whether it is available or not. If it is not, a appropriate message is displayed, if it is, then the system displays the book details and requests for the number of copies require. If the requested are available, the total cost of the required copies is displayed: otherwise the message" Required copies not in stock"is displayed. Design a system using a class called books with suitable member functions and constructors. Use new operator in constructor to allocate

				memory space require.
	3 rd	Constructor and Destructor with and without Arguments, Objects	3 rd (G1)	Previous program Continued
			4 th (G2)	Previous program Continued
5 th	1 st	Dynamic memory Allocation with new and Delete Operator	1 st (G1)	Define a class string that could work as a user defined string type include constructors that will enable us to create an .un-initialized string String s1; :/ string with length 0 And also to initialize an object with string constant at the time of creation like String s2("well done"); . Include a function that adds two strings to make a third string.
	2 nd	Revision	2 nd (G2)	Define a class string that could work as a userdefined string type include constructors that will enable us to create an .un-initialized string String s1; :/ string with length 0 And also to initialize an object with string constant at the time of creation like String s2("well done"); . Include a function that adds two strings to make a third string.
	3 rd	Revision	3 rd (G1)	Previous program Continued
			4 th (G2)	Previous Program Continued
6 th	1 st	Unit 4: Member Function	1 st (G1)	Create a class float that contains 2 float data member. Over load all the 4 arithmetic operators so that do operate on the objects of float.
	2 nd	Method definition	2 nd (G2)	Create a class float that contains 2 float data member. Over load all the 4 arithmetic operators so that do operate on the objects of float.
	3 rd	Inline Implementation, Constant member functions	3 rd (G1)	Previous Program Continued
			4 th (G2)	Previous Program Continued
7 th	1 st	Static Function, This Pointer	1 st (G1)	Programming Exercise on Hybrid Inheritance
	2 nd	Friend Function and its Characteristics	2 nd (G2)	Programming Exercise on Hybrid Inheritance
	3 rd	Revision	3 rd (G1)	Previous Program Continued
			4 th (G2)	Previous Program Continued
8 th	1 st	Unit 5: Overloading Member Function Introduction to Operator Overloading, Need of operator overloading	1 st (G1)	Define 2 classes POLAR and RECTANGLE to represent points in the POLAR and RECTANGLE systems. Use conversion routines to convert from one system to the other.
	2 nd	prefix and postfix, overloading binary operators instream/outstream operator overloading	2 nd (G2)	Define 2 classes POLAR and RECTANGLE to represent points in the POLAR and RECTANGLE systems. Use conversion routines to convert from one system to the other.
	3 rd	Constructor Overloading, Type Conversion, Rules of Operator Overloading	3 rd (G1)	Previous Program Continued
			4 th (G2)	Previous Program Continued
9 th	1 st	Comparison between Function Overloading and overriding	1 st (G1)	Previous Program Continued
	2 nd	Unit 6: Inheritance Definition of inheritance, Types of inheritance; Single inheritance, hierarchical inheritance, multiple inheritance, hybrid inheritance	2 nd (G2)	Previous Program Continued

	3 rd	protected data, private data, public/data, inheriting constructors and destructors	3 rd (G1)	Create a base class called shape. use this class to store two double type values that could be used to compute the area of fig. Derive the specific class called TRIANGLE and RECTANGLE from the data shape. Add to base class, a member function get - data () to initialize base class data members and another member and another member function display – area() to compute and display the area of the fig.. Make display – area () as a virtual function and redefine function in the derived classes to suit their requirements, Using these 3 classes design a program that will accept dimension of RECTANGLE or TRIANGLE interactivity and display the area. Remember the 2 values given as input will be treated as length of 2 sides in the case of rectangle and as base and height in the case of triangles and used as follows: Area of rectangle = x*y Area of triangle = 1/2 *x*y
			4 th (G2)	Create a base class called shape. use this class to store two double type values that could be used to compute the area of fig. Derive the specific class called TRIANGLE and RECTANGLE from the data shape. Add to base class, a member function get - data () to initialize base class data members and another member and another member function display – area() to compute and display the area of the fig.. Make display – area () as a virtual function and redefine function in the derived classes to suit their requirements, Using these 3 classes design a program that will accept dimension of RECTANGLE or TRIANGLE interactivity and display the area. Remember the 2 values given as input will be treated as length of 2 sides in the case of rectangle and as base and height in the case of triangles and used as follows: Area of rectangle = x*y Area of triangle = 1/2 *x*y
10 th	1 st	constructor for virtual base classes, constructors and destructors of derived classes, and virtual functions	1 st (G1)	Previous Program Continued
	2 nd	size of a derived class, order of invocation,	2 nd (G2)	Previous Program Continued
	3 rd	Revision	3 rd (G1)	Previous Program Continued
			4 th (G2)	Previous Program Continued
11 st	1 st	Unit 7:Polymorphism and Virtual Functions Importance of virtual function, function call binding	1 st (G1)	Previous Program Continued
	2 nd	virtual functions	2 nd (G2)	Previous Program Continued
	3 rd	implementing late binding	3 rd (G1)	Previous Program Continued
			4 th (G2)	Previous Program Continued
12 th	1 st	need for virtual functions, abstract base classes	1 st (G1)	Exercise on file handling
	2 nd	pure virtual functions,	2 nd (G2)	Exercise on file handling
	3 rd	virtual destructors	3 rd (G1)	Exercise on file handling
			4 th (G2)	Exercise on file handling
13 th	1 st	Revision	1 st (G1)	Exercise on file handling
	2 nd	Unit 8: File and Stream Components of a file, different operation of the file	2 nd (G2)	Exercise on file handling
	3 rd	communication in files, creation of file streams	3 rd (G1)	Exercise on file handling
			4 th (G2)	Exercise on file handling
14 th	1 st	stream classes, headerfiles, updating of file,	1 st (G1)	Exercise on file handling

	2 nd	opening and closing a file	2 nd (G2)	Exercise on file handling
	3 rd	file modes and filepointers and their manipulations	3 rd (G1)	Exercise on file handling
			4 th (G2)	Exercise on file handling
15 th	1 st	functions manipulation of file pointers, detecting end-of-file.	1 st (G1)	Revision
	2 nd	Revision	2 nd (G2)	Revision
	3 rd	Revision	3 rd (G2)	Revision
			4 th (G2)	Revision

Lesson Plan

Name of the Faculty : Mr Pankaj Malik
Discipline : Computer Engineering
Semester : VI
Subject : Programming In Java

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

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

Note: G1 and G2 are the respective Groups of students

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment/ Test)	Practical Day	Topic
1 st	1 st	Unit 1:Introduction to Java A brief history, how Java works?, Java Virtual Machine (JVM), Java In Time (JIT) compiler	1 st G1	1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50 b) Display the output which is given below: * * * * * *
	2 nd	Java features, using Java with other tools, native code, Java application types,	2 nd G2	1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50 b) Display the output which is given below: * * * * * *
	3 rd	comparison with C and C++		
2 nd	1 st	Unit 2: Working with data types, control flow statements	1 st	1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50 b) Display the output which is given below: * * * * * *
	2 nd	Arrays, casting	2 nd	1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50 b) Display the output which is given below: * * * * * *
	3 rd	command line arguments		
3 rd	1 st	Revision	1 st G1	c) Write a program which sorts an array of type integer d) Write a programme to determine the sum of the following harmonic series for a given value of n: $1+1/2+1/3+\dots+1/n$ the value of n should be given interactively through the keyboard
	2 nd	Revision	2 nd G2	c) Write a program which sorts an array of type integer d) Write a programme to determine the sum of the following harmonic series for a given value of n: $1+1/2+1/3+\dots+1/n$ the value of n should be given interactively through the keyboard
	3 rd	Unit 3: Java Classes and Memory management Introduction to Classes, inheritance		

4 th	1 st	Encapsulation and polymorphism	1 st G1	Write a programme to convert the given temperature in Fahrenheit to Celsius using the following conversion formula $C = F.32/1.8$ and display the value in a tabular form
	2 nd	Constructors and finalizers	2 nd G2	Write a programme to convert the given temperature in Fahrenheit to Celsius using the following conversion formula $C = F.32/1.8$ and display the value in a tabular form
	3 rd	Garbage collection, access specifier		
5 th	1 st	Revision	1 st G1	Write a programme to find all the numbers and sum of all integers greater than 100 less than 200 that are divisible by 7
	2 nd	Unit 4: Interfaces and Packages: Using Java interface	2 nd G2	Write a programme to find all the numbers and sum of all integers greater than 100 less than 200 that are divisible by 7
	3 rd	Using Java packages		
6 th	1 st	Revision	1 st G1	Given a list of marks ranging from 0 to 100, write a programme to compute and print the number of student should have obtained marks (a) in the range 81 to 100 (ii) in the range 61 to 80 (c) in the range 41 to 60 (d) in the range 0 to 40. The programme should use a minimum number of if statement
	2 nd	Unit 5: Exception Handling and stream files Over view of exception handling	2 nd G2	Given a list of marks ranging from 0 to 100, write a programme to compute and print the number of student should have obtained marks (a) in the range 81 to 100 (ii) in the range 61 to 80 (c) in the range 41 to 60 (d) in the range 0 to 40. The programme should use a minimum number of if statement
	3 rd	Method to use exception handling		
7 th	1 st	Method available to exceptions (The throw statement, the throws class, finally class),	1 st G1	Admission to a professional course is subject to the following conditions: a) Marks in mathematics ≥ 60 b) Marks in physics ≥ 50 c) Marks in chemistry ≥ 40 d) Total in all 3 subjects ≥ 200 (OR) Total in mathematics and physics ≥ 150 given the marks in the 3 subjects. Write the programme to process the application to list the eligible candidates
	2 nd	Creating your own exception classes	2 nd G2	Admission to a professional course is subject to the following conditions: a) Marks in mathematics ≥ 60 b) Marks in physics ≥ 50 c) Marks in chemistry ≥ 40
	3 rd	Revision		

				d) Total in all 3 subjects ≥ 200 (OR) Total in mathematics and physics ≥ 150 given the marks in the 3 subjects. Write the programme to process the application to list the eligible candidates
8 th	1 st	Unit 6:Threads and multi – threading Overview, thread basics – creating and running a thread,	1 st G1	The number in the sequence 1 1 2 3 5 8 13 21 Are called Fibonacci numbers. Write programme using a do while loop to calculate and print the first m fibonacci numbers (Hint: after the first 2 numbers in the series, each number is the sum of the 2 preceding the numbers)
	2 nd	The thread control methods	2 nd G2	The number in the sequence 1 1 2 3 5 8 13 21 Are called Fibonacci numbers. Write programme using a do while loop to calculate and print the first m fibonacci numbers (Hint: after the first 2 numbers in the series, each number is the sum of the 2 preceding the numbers)
	3 rd	The threads life cycle and synchronization		
9 th	1 st	Revision	1 st G2	Write a programme to evaluate the following investment equation $V=P(1+r)^n$ and print the tables which would give the value of V for various combination of the following values of P, r and n.
	2 nd	Revision	2 nd G2	Write a programme to evaluate the following investment equation $V=P(1+r)^n$ and print the tables which would give the value of V for various combination of the following values of P, r and n.
	3 rd	Unit 7. Introduction to Applet, Application and JDK Java applets Vs Java applications		
10 th	1 st	Building application with JDK	1 st G1	Write a program which will store the students roll no. names and total marks in the database
	2 nd	Building applets with JDK	2 nd G2	Write a program which will store the students roll no. names and total marks in the database
	3 rd	Building applets with JDK		
11 th	1 st	Building applets with JDK	1 st G1	Write a program which will display all those records whose marks are above 75%
	2 nd	Building applets with JDK	2 nd G2	Write a program which will display all those records whose marks are above 75%
	3 rd	HTML for Java applets		
12 th	1 st	HTML for Java applets	1 st G1	Write a program to draw the following using Applet:
	2 nd	HTML for Java applets	2 nd G2	Write a program to draw the following using Applet:
	3 rd	HTML for Java applets		
13 th	1 st	Managing input	1 st G1	Exercises on implementing Java Classes.

	2 nd	Managing input	2 nd G2	Exercises on implementing Java Classes.
	3 rd	Managing input		
14 th	1 st	Managing input	1 st G1	Exercises on exceptional handling
	2 nd	Managing input	2 nd G2	Exercises on exceptional handling
	3 rd	Revision		
15 th	1 st	Revision	1 st G1	Exercises on creating and running threads
	2 nd	Revision	2 nd G2	Exercises on creating and running threads
	3 rd	Revision		

G-2 Lesson Plan

Name of the Faculty : Smt. Poonam Dahiya
 Discipline : Computer Engg.
 Semester : 4th
 Subject : DBMS
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory		Practical	
	Lecture Day	Topic (including assignments /tests)	Practical Day	Topic
1 st Week	1 st	Database Systems : Introduction to Database and its purpose & Database System	1 st -G1	Overview, Features and functionality
	2 nd	Why Database & History of Database System	2 nd - G2	Overview, Features and functionality
	3 rd	Characteristics of the database approach & Advantages and disadvantages of database systems		
Week 2	1 st	Introduction to Conventional File System & Concept of files, record, data, information retrieval Comparison between Conventional System and DataBase System	1 st -G1	Application development in MS-Access
	2 nd	Classification of DBMS Users - Actors on the scene & Database Administrators, Database Designers, End Users, System Analysts and Application Programmers	2 nd - G2	Application development in MS-Access
	3 rd	Workers behind the scene (DBMS system designers and implementers, tool developers, operator and maintenance personnel) History of data base System		
Week 3	1 st	Assignment on Database system	1 st -G1	Exercises on different forms of select statement
	2 nd	Test		
	3 rd	Data models: (Physical Model, Object based Model, Record based Model Network Model, Heirachical Model)	2 nd - G2	Exercises on different forms of select statement
Week 4	1 st	Schemas, sub schemas instances, data base state. Case Study of models and schemas (examples student information System)	1 st -G1	Exercises on altering of Tables
	2 nd	DBMS Architecture: Three Level of Architecures		
	3 rd	Data base Administrator and Administration, Database Management System – Advantage and Disadvantage, Classification of DBMS, DBMS Interfaces	2 nd - G2	Exercises on altering of Tables
Week 5	1 st	Concept of centralized and Client /Server Architecture for DBMS: Single Tier, Two Tier and Three Tier	1 st -G1	Exercises on dropping of Tables
	2 nd	Data Independence Logical data Independence , Physical data Independence		
	3 rd	Database Languages and Interfaces DBMS Language & DBMS Interfaces	2 nd - G2	Exercises on dropping of Tables
Week 6	1 st	Classification of Database Management Systems: Centralized, Distributed, parallel and Object based	1 st -G1	Exercises on creation of tables
	2 nd	Assignment on Database Architecture		
	3 rd	Test	2 nd - G2	Exercises on creation of tables
Week 7	1 st	Data Modeling using E.R. Model: Data Modeling using E.R. Model (Entity Relationship Model)	1 st -G1	Exercises on insertion of data into tables
	2 nd	Data Models Classification : File based or primitive models, traditional data models, semantic data models		
	3 rd	Entities and Attributes	2 nd - G2	Exercises on insertion of data into tables
Week 8	1 st	Entity types and Entity sets	1 st -G1	Exercises on deletion of data
	2 nd	Key attribute and domain of attributes		

	3 rd	Relationship among entities	2 nd - G2	Exercises on deletion of data
Week 9	1 st	Database design with E/R model	1 st -G1	Exercises on deletion of data using different conditions
	2 nd	ER Design Issues		
	3 rd	Mapping Constraints	2 nd -G2	Exercises on deletion of data using different conditions
Week 10	1 st	Assignment on Entity Relationship Model	1 st -G1	Exercises on UPDATE statement
	2 nd	Test		
	3 rd	Relational Model Concepts: Domain, Attributes, Tuples	2 nd - G2	Exercises on UPDATE statement
Week 11	1 st	Cardinality Keys- Primary, Secondary	1 st -G1	Exercise on structured query Language
	2 nd	foreign, Alternative Keys etc and Relations		
	3 rd	Assignment on Relational Model	2 nd - G2	Exercise on structured query Language
Week 12	1 st	Test	1 st -G1	Exercise on Select Command with where clause
	2 nd	Structured Query Language – Data definition language : Create Command		
	3 rd	Data definition language : Alter & Drop commands	2 nd - G2	Exercise on Select Command with where clause
Week 13	1 st	Data Manipulation Language (DML)	1 st -G1	Exercise on Select Command using conditional expressions and Boolean operator
	2 nd	Select command with where clause using conditional expressions		
	3 rd	Boolean operators	2 nd - G2	Exercise on Select Command using conditional expressions and Boolean operator
Week 14	1 st	Group by clause & like operator	1 st -G1	Exercise on Select Command with group by clause and Like operator
	2 nd	Insert Command		
	3 rd	Update and Delete commands	2 nd - G2	Exercise on Select Command with group by clause and Like operator
Week 15	1 st	Assignment on DDL	1 st -G1	Practice exercises on MS Access and SQL
	2 nd	Assignment on DML		
	3 rd	Test	2 nd - G2	Practice exercises on MS Access and SQL

Lesson Plan

Name of the Faculty : Smt. Garima Rohela
 Discipline : Computer Engg.
 Semester : 2nd
 Subject : Basic Electronics
 Lesson plan duration : 15 weeks (from January, 2018 to April, 2018)

Week	Theory		Practical	
	Lecture Day	Topic (including assignments /tests)	Practical Day	Topic
1 st Week	1 st	Semiconductor Physics: Review of basic atomic structure and energy levels, concept of insulators, conductors and semi conductors	1 st -G1	Operation and use of the following instruments: Multi-meter, CRO, Signal generator, LCR meter, Regulated Power Supply by way of taking readings of relevant quantities with their help.
	2 nd	Atomic structure of Germanium (Ge) and Silicon (Si), covalent bonds	2 nd - G2	Operation and use of the following instruments: Multi-meter, CRO, Signal generator, LCR meter, Regulated Power Supply by way of taking readings of relevant quantities with their help.
	3 rd	Concept of intrinsic and extrinsic semi conductor, process of doping		
Week 2	1 st	Assignment	1 st -G1	Practice
	2 nd	Energy level diagram of conductors, insulators and semi conductors; minority and majority charge carriers	2 nd - G2	Practice
	3 rd	P and N type semiconductors and their conductivity, effect of temperature on conductivity of intrinsic semi conductors.		
Week 3	1 st	Revision & Test	1 st -G1	Plotting of V-I characteristics of a PN junction diode
	2 nd	Semiconductor Diode: PN junction diode, mechanism of current flow in PN junction, forward and reverse biased PN junction		
	3 rd	potential barrier, drift and diffusion currents	2 nd - G2	Plotting of V-I characteristics of a PN junction diode
Week 4	1 st	Depletion layer, concept of junction capacitance in forward and reverse biased condition	1 st -G1	Plotting of V-I characteristics of a Zener diode
	2 nd	V-I characteristics, static and dynamic resistance and their value calculation from the characteristics.		
	3 rd	Application of diode as half-wave, full wave and bridge rectifiers.	2 nd - G2	Plotting of V-I characteristics of a Zener diode
Week 5	1 st	Peak Inverse Voltage, rectification efficiencies and ripple factor calculations, shunt capacitor filter, series inductor filter, LC and π filters	1 st -G1	Practice
	2 nd	Assignment		
	3 rd	Types of diodes, characteristics and applications of Zener diodes. Zener and avalanche breakdown	2 nd - G2	Practice
Week 6	1 st	Clipping and Clamping Circuits	1 st -G1	To observe output of clipping and clamping circuits.
	2 nd	Revision & Test		
	3 rd	Introduction to Bipolar-Transistors: Concept of a bipolar transistor, its structure, PNP and NPN transistors	2 nd - G2	To observe output of clipping and clamping circuits.
Week 7	1 st	Their symbols and mechanism of current flow; Current relations in a transistor	1 st -G1	Measurement of the voltage gain, input and output impedance in a single state CE amplifier circuit
	2 nd	Concept of leakage current		
	3 rd	Assignment	2 nd - G2	Measurement of the voltage gain, input and output impedance in a

				single state CE amplifier circuit
Week 8	1 st	CB, CE, CC configurations of a transistor	1 st -G1	Design of following circuit on breadboard and observe the output of : a. Half-wave rectifier circuit using one diode b. Full-wave rectifier circuit using two diodes c. Bridge-rectifier circuit using four diodes
	2 nd	Input and output characteristics in CB and CE configurations		
	3 rd	input and output dynamic resistance in CB and CE configurations	2 nd - G2	Design of following circuit on breadboard and observe the output of : a. Half-wave rectifier circuit using one diode b. Full-wave rectifier circuit using two diodes c. Bridge-rectifier circuit using four diodes
Week 9	1 st	Current amplification factors. Comparison of CB, CE and CC Configurations	1 st -G1	Practice & Viva
	2 nd	Transistor as an amplifier in CE Configuration		
	3 rd	Concept of DC load line and calculation of current gain and voltage gain using DC load line	2 nd -G2	Practice & Viva
Week 10	1 st	Revision, Assignment & Test	1 st -G1	Plotting of the wave shape of full wave rectifier with a. Shunt capacitor filter b. Series inductor filter
	2 nd	Transistor Biasing Circuits: Concept of transistor biasing and selection of operating point.		
	3 rd	Need for stabilization of operating point	2 nd - G2	Plotting of the wave shape of full wave rectifier with a. Shunt capacitor filter b. Series inductor filter
Week 11	1 st	Different types of biasing circuits	1 st -G1	Plotting of input and output characteristics and calculation of parameters of transistors in CE configuration.
	2 nd	Assignment & Test		
	3 rd	Single Stage Transistor Amplifier: Single stage transistor amplifier circuit,	2 nd - G2	Plotting of input and output characteristics and calculation of parameters of transistors in CE configuration.
Week 12	1 st	concept of dc and ac load line and its use	1 st -G1	Plotting of input and output characteristics and calculation of parameters of transistors in CB configuration.
	2 nd	Assignment		
	3 rd	Explanation of phase reversal of output voltage with respect to input voltage.	2 nd - G2	Plotting of input and output characteristics and calculation of parameters of transistors in CB configuration.
Week 13	1 st	Explanation of phase reversal of output voltage with respect to input voltage.	1 st -G1	Measurement of voltage gain, input and output impedance in a single state CE amplifier circuit.
	2 nd	Revision & Test		
	3 rd	Field Effect Transistors : Field Effect Transistors	2 nd - G2	Measurement of voltage gain, input and output impedance in a single state CE amplifier circuit.
Week 14	1 st	Their applications.	1 st -G1	Plotting of V-I characteristics of a FET based amplifier.
	2 nd	Construction, operation and characteristics of a MOSFET		
	3 rd	Construction, operation and characteristics of a MOSFET in depletion and enhancement modes and its applications	2 nd - G2	Plotting of V-I characteristics of a FET based amplifier.
Week 15	1 st	C MOS - advantages and applications	1 st -G1	Practice & Viva
	2 nd	Comparison of JFET, MOSFET and BJT		
	3 rd	Revision, Assignment & Test	2 nd - G2	Practice & Viva