

## Teaching Plan Academic Year 2015-2016

**Class** : BCS

**Semester:** III SEM

**Subject** : Advanced Data Structure

**Paper No:** CS301T

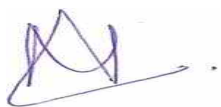
**Periods per week** : Th\_3\_

**Test (Date):**\_

**Weeks (Total)** : 15

**Tutorial (Date):**\_

Week	Topic to be Covered
1	Representing Binary, Trees in Memory, Traversing Binary Trees, Traversal Algorithms using Stacks, Header Nodes;
2	Threads, Binary Search Trees Searching and Inserting in Binary Search Trees, Deleting in Binary
3	Search Tree, AVL Search Trees, Insertion in an AVL Search Tree, Deletion in an AVL Search Tree,
4	Heap; Heapsort Path Lengths; Huffman's Algorithm.
5	Terminology, Sequential Representation of Graphs;
6	Adjacency matrix,
7	Path Matrix, Warshall's Algorithm, Shortest Paths,
8	Linked Representation of a Graph, Operations on Graphs,
9	Traversing a Graph, Posets; Topological Sorting.
10	Introduction, Sorting, Insertion sort,
11	Selection sort, Merging, Merge-Sort,
12	Radix Sort, Searching and Data Modification, Hashing.



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**Teaching Plan**  
**Academic Year 2015-2016**

**Class : BCS IIyr**

**Semester: III**

**Subject: OOPS using c++**

**Paper No: CS304CT**

**Periods per week : Th 3 Practical: 4**

**Test (Date):**

**Weeks (Total) : 15**

**Tutorial (Date):**

Week	Topic to be Covered
1	Unit II Introduction of OOP Procedural Vs Object Oriented Programming Basic concepts of Object Oriented Programming, Class, Object, Data Abstraction, Encapsulation, Inheritance Polymorphism, Dynamic Binding, Message Passing
2	Benefits and applications of OOP History and overview of C++, C++ program structure. , Reference variables, Scope resolution operator
3	Member-de-referencing operators, new and delete, cin and cout The endl and setw manipulator 2 Functions in C++: Function prototype
4	Call by reference (using reference variable), Return by reference Inline function, Default arguments, Const arguments. Unit III Function overloading: Different numbers and different kinds of arguments
5	2 Objects and Classes: concept overview of structure. Declaring class with ex. Accessing class member Specifying a class, private and public.
6	Defining member functions, example, ,

	Nesting of member function
	Object as data types Memory allocation for objects
7	static data members and member functions. .
	Array of objects,syntax example Sample program
	Objects as function argument, returning objects sample example.
8	Friend function and its characteristics ,Sample programs,
	Unit III Constructors and Destructors:Introduction
	default constructors, parameterized constructors
9	Copy Constructor Multiple constructors in a class,Destructors
	2Operator Overloading:Overloading unary operators Rules for operator overloading,
	Overloading binary operators
10	Overloading without friend function and using friend function
	Overloading binary operators such as arithmetic and relational operators
	Concatenating Strings, Comparison operators.
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## Teaching Plan Academic Year 2015-2016

**Class** : BCS **Semester:** III  
**Subject** : DBMS **Paper No:**cs305-T  
**Periods per week** : Th. 3 Pract. \_\_\_\_\_ **Test (Date):**\_\_\_\_\_  
**Weeks (Total)** : 15 **Tutorial (Date):**\_\_\_\_\_

Week	Topic to be Covered
1	Unit – I Basic Concepts of DBMS: Data Definition, Types of Data, Record and file, File based system and processing .Data Base System Applications. Purpose of Data Base System.
2	Abstraction and Integration, Three level Architecture proposal for a DBM, Components of a DBMS.
3	Advantages and Disadvantages of DBMS.Data Association,Representation of association and relationships
4	Data Model:- Relational,E-R,Semi-structure,object-oriented,network and Hierarchical data model.
5	Abvantages and disadvantages of above model.unit II Entity,Entity set, types of Entities,Strong and weak entity representation.
6	Attribute,Relationship,Mapping cardinality
7	Entity-Relationship Design Issues, Test and Tutorial conducted.
8	Relational Data Model,Data Base schema,Constraints: Integrity rule 1 and 2.
9	Normal form:Anomalies, Functional Dependency, Dependency Diagram, first normal form.
10	Second normal form,Third normal form, Conversion form universal to 1 NF,1NF to 2Nf and 2Nf to 3Nf
11	Unit III: Relational Algebra:-Union, Intersection, Difference
12	Cartesian Product, Selection Projection, Join :- Natural and outer join Division,Relation Algebraic Queries.

13	Introduction to oracle software
14	Logging to SQL/iSQL,SQL plus worksheet.
15	Revision, Test and Tutorial on complete syllabus

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## Teaching Plan Academic Year 2015-2016

**Class** : BSc(CS) **Semester:** III Sem  
**Subject** : PC Maintenance **Paper No:** CS303BT  
**Periods per week** : Th\_03 Practical: \_02\_ **Test (Date):** \_\_\_\_\_  
**Weeks (Total)** : 15 **Tutorial (Date):** \_\_\_\_\_

Week	Topic to be Covered
1	Cassis/Case,baby,Desktop
	Tower cases ,power supplies
	Power connectors, mounting points
2	Motherboard, form factors
	Expansion buses slots
	CPU,RAM,BIOS
3	Chipset, Motherboard ports and Controller
	Video System ,Video controllers
	Resolution, video memory, video drivers
4	IDE drive,SCSI controller
	CD,DVD Drive, modem
	Input devices ,drivers
5	OS,Closing system
	Mounting motherboard in cabinet
	Installation of cards ,devices and then connecting cables
6	Role of CMOS entering CMOS setup
	Basic CMOS optimization , Hidden CMOS setting
7	OS installation
8	Windows
9	UNIX,LINUX
	Device driver installation
10	Creating users, giving rights to user
	Network settings of PC
11	Sharing files and devices on network.
	Installation Antivirus, Setting and updating Antivirus
12	Introduction to laptop
	System features, laptop components
13	Processors,Motherboard
	Memory ,power expansion bus
	Hard disk and removable storage devices
14	Revision
15	Test

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( Mrs.Ruheena Quadri )

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( Dr. S. Javed Kabeer )

## Teaching Plan

### Academic Year 2015-2016

**Class** : BCs **Semester:** IVst Sem  
**Subject** : Core Java **Paper No:** CS404-T  
**Periods per week** : Th\_3\_ Practical: \_3\_ **Test (Date):**\_\_\_\_\_  
**Weeks (Total)** : 15 **Tutorial (Date):**\_\_\_\_\_

Week	Topic to be Covered
1	Introduction of Java .
	Introduction of History.
	Features of java.
2	Difference of java , C & C++.
	Java support system.
	Java Environment.
3	Overview of java program .
	Structure of Java program.
	Implementation of java program
4	Execution of java program.
	Introduction of CLASS
	Introduction of Objects
5	Arrays
	Adding Variable and objects
	Method overloading
6	Constructors and types
	Command line arguments
	Inheritance
7	Types of inheritance.
	EXAMPLES Types of inheritance.
	Visibility control
8	Method overriding
	Dynamic Methods
	Abstract methods
9	Interfaces
	Implementing interfaces
	String classes and methods
10	Vectors
	Introduction to packages
	API packages

11	Using packages
	Adding classes and importing classes in packages
	EXAMPLES
12	Exceptions
	Syntax of exceptional handling
	Multiple catch system
13	Throws
	Multiple Threading
	Creating threading
	Thread class
14	Run() method
	Life cycle of thread
	Thread method and priority
15	Revision

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**Teaching Plan**  
**Academic Year 2015-2016**

**Class :BCS –II Year**  
**Subject :Statistical Method**  
**Periods per week: Th. Pract: -**  
**Weeks (Total): 15**

**Semester: III**  
**Paper No:CS306-T**  
**Test**  
**Tutorials**

Week	Topic to be Covered
1	1.Introduction and basic concepts of Statistics Definition of Statistics, Scope and importance of Statistics.
2	Primary and Secondary data , Types of data : qualitative m quantitative, Discrete m continuous, cross-section, time series, failure, industrial, directional data.
3	Graphical presentation : Histogram , frequency polygon, frequency Curves Diagrammatic presentation : Bar diagrams, Pie diagram, scatter diagram.
4	Relative and cumulative and exclusive method of distributions.
5	Classification of data : Discrete and continuous frequency Distributions, inclusive and exclusive methods of classification,
6	2.Measures of Central Tendency – Concept of central tendency , For group and Ungroup data
7	Arithmetic mean (A.M.) Simple and weighted Merits and demerits of A.M Mode : Computation for frequency and non-frequency data .

8	Computation of mode , Merits and demerits of mode, Median
9	Computation for frequency and non-frequency data,
10	computation. Merits & demerits of median.
11	Geometric mean (G.M.) computation for GM, Merits demerits and Applications of G.M. Harmonic Mean (H M )
12	Computation for Frequency, non-frequency data, merits, demerits.
13	Measures of Dispersions – Dispersion and measures of Dispersion , Range (dimensions and problems) Quartile Deviation
14	(definitions and problems) Mean Deviation (definitions and problems) Standard Deviation
15	(definitions and problems) Variance, different formulae for calculating Variance.

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## Teaching Plan Academic Year 2015-2016

**Class** : BCS **Semester:** III  
**Subject** : Unix Operating System **Paper No:**cs302-T  
**Periods per week** : Th. 3 Pract. \_\_\_\_\_ **Test (Date):**\_\_\_\_\_  
**Weeks (Total)** : 15 **Tutorial (Date):**\_\_\_\_\_

Week	Topic to be Covered
1	Unit – I overview of UNIX operating system, basic features of UNIX operating system,File structure.
2	CPU scheduling.Memory Management.
3	Implementation of operating system functions in UNIX
4	UNIT-II Basic commands ls,Cat,Cd,date,Calendar.
5	Who,printf,tty,sty,uname,passwd
6	Echo,tput,bc,script,spell and ispell
7	Files and Directories, test and tutorial

8	File permission,Basic Operation on files, changing permission modes.
9	Standards files. UNIT III Introduction to shell scripting, shell scripts,read
10	Command line arguments, Exit status of a command,The logical operators\$\$ and II
11	Exit ,if,and case conditions,expr,sleep
12	Wait,while,until,for \$,@,redirection.
13	Set,trap,sample validation.Define system administration,Booting the system
14	Maintaining user accounts, file system and special files,Backup.
15	Restoration,Test and Tutorial.

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