

Lesson Plan of the 5th semester for session 2020 -20 (July- Dec)

Name of the faculty: Ms. Manisha

Designation :

Discipline : Computer Science and Engg.

Semester : 5th

Subject : **Programming in Java (PCC-CSE-309G)**

Lesson Plan duration : 15 weeks

Work Load per week in hours: Lectures- 03

Week	Lecture day	Topic (Including Assignment/Test)
UNIT – I		
1	1	Evolution of Java, Object Oriented Programming Structure, Overview and characteristics of Java, Java program Compilation and Execution Process
	2	Organization of the Java Virtual Machine, Client side Programming, Platform Independency & Portability, Security,
	3	Relation b/w JVM, JRE and JDK, Introduction to JAR format, Naming Conventions, Data types & Type casting, operators,
2	4	Security Promises of the JVM, Security Architecture and Security Policy, security aspects, sandbox model
	5	Classes, Objects, attributes, methods, data encapsulation, reference variables
	6	Constructors, Anonymous block, Method Overloading, Static Data members, Block & methods Memory Structure Stack, Heap, Class & Method area
3	7	Class loading & Execution flow: Static vs Dynamic Class loading, implicit vs explicit class loading, class loading operations
	8	Argument Passing Mechanism: Passing primitive arguments, passing objects, Wrapper Classes
	9	This keyword: Referencing instance members, Intra class constructor chaining, Method chaining
4	10	Inheritance & code reusability: Extending classes for code reusability, Usage of super keyword, Method Overriding, Object class
	11	Static & Dynamic binding, Inheritance and Is-A relation, Runtime Polymorphism and Generalization, Abstract classes & methods, Final Keyword
	12	Interfaces and Role based Inheritance: Feature & Role based Inheritance

5	13	classes & interfaces, interface applications in real scenarios; Has-A Relation ,Aggregation & Composition
	14	Nested classes, Inner classes, Anonymous Inner classes, String Buffer Class, tokenizer, applets, Life cycle of applet and Security concerns
	15	Creating Threads, Thread Priority, Blocked States, Extending Thread Class, Runnable Interface, Starting Threads, Thread Synchronization
6	16	Synchronize Threads, Sync Code Block, Overriding Synced Methods,
	17	Thread Communication, wait, notify and notify all, Assignments
	18	Swing class hierarchy, containers, user interface components, graphics context
7	19	AWT Components, Component Class, Container Class, Layout Manager Interface Default Layouts, Insets and Dimensions
7	20	Border Layout, Flow Layout, Grid Layout, Card Layout Grid Bag Layout AWT Events, Event Models, Listeners
	21	Class Listener, Adapters, Action Event Methods Focus Event Key Event, Mouse Events, Window Event
8.	22	Need of Packages, associating classes to Packages, Class path environment variable, Import Keyword and Feature of static import
	23	exception and error, Exception Handling & Robustness
	24	Try and catch block, Exception handlers, throw keyword
9.	25	Checked and Unchecked Exceptions, Role of finally, User defined Exceptions
	26	Role and Importance of Collection Framework, List & Set based collection, Iterator & List Iterator
	27	Maps, Searching elements in List, Hash and Tree based collections,
10.	28	Role of equals and hash Code () methods, Comparable and Comparator Interfaces, Thread Safety and Vector
	29	Difference b/w Enumeration and Iterator, Type safety and Generics, Common algorithms and Collections class,
	30	Using Properties class for managing properties files
11	31	Connectivity Using JDBC: Overview of native and ODBC Drives,
	32	Introduction to JDBC, Type of JDBC drivers, Usage of drivers, D
	33	Defining properties-based Connection Factory; Basic database operations: Insert, Delete, Update, and Select

12.	34	Prepared Statement: Statement, Prepared Statement, Setting Query parameters, Executing Queries
	35	Callable Statement Creating PL/SQL Stored procedures and functions
	36	Creating Callable statements, Assignments
13.	37	Executing procedures & functions
	38	Batch Updation, Transacting Queries
	39	Programmatic initialization of database
14.	40	Result Set MetaData ,Test
	41	Input/Output Stream, Stream Filters, Buffered Streams,
	42	Data input and Output Stream, Print Stream Random Access File, Reflection reflection API,
15	43	New Instance() method, java p tool, creating java p tool, creating
	44	Applet viewer, call private method, java 9 features
	45	Revision