

Rajarshi Shahu Mahavidyalaya, (Autonomous), Latur

Department of Computer Science

Teaching Plan (Semester-III,V)

(July-2021 to Dec-2021)

Name of the Teacher: Ms. Latoriya Pooja S

1. Details of Classes to be taught

Sr. No.	Class	Subject	Course code and title	Total Lectures
1	B. Sc. SY	Computer Science	U-COS-343 Operating System	45
2	B. Voc. SY	Computer Technology	CT.GE.302 Operating System	60
3	B. Voc. TY	Computer Technology	CT.GE.501 Logical Reasoning and Personality Development	60
4	B. Voc. TY	Computer Technology	CT.SC.502 Kotlin Programming	60

Course: Operating System(B.Voc-SY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	<p>Unit I Introduction to Operating System</p> <p>What is an operating system? History of operating system, Computer hardware & software, Different operating systems</p> <p>Various System Software associated with Operating Systems, Shell and Kernel, Systems Calls and theirs types and implementation</p>	<p>12</p> <p>05</p>	<p>05.07.2021 to 20.07.2021</p> <p>22.07.2021 to 29.07.2021</p>	<p>PPT representation for Introduction of introduction of Operating System</p>	
2	<p>Unit II Process & Thread Management</p> <p>Processes, PCB, Process</p>		<p>02.08.2021 to</p>	<p>PPT representation for Process and Thread</p>	

	<p>States, Threads & TCB, difference and Similarities in Threads and Process</p> <p>Inter-process communication, CPU scheduling, IPC problems. Process Synchronization & deadlocks</p> <p>Critical Section Problems & Semaphores, Classical Problems of process Synchronization</p> <p>Introduction to deadlocks, Deadlock detection and recovery, Deadlock avoidance, Deadlock prevention, issues.</p>	<p>05</p> <p>05</p> <p>08</p>	<p>15.08.2021</p> <p>16.08.2021 To 30.08.2021</p> <p>02.08.2021 To 16.09.2021</p>	<p>management</p>	<p>Unit Test-I</p>
3	<p>Unit III Memory Management</p> <p>Address Spaces and Address Translation, Swapping & memory allocation</p> <p>Paging & Segmentation, Virtual Memory & Demand Paging, Page Replacement Algorithm, Thrashing</p>	<p>07</p> <p>08</p>	<p>20.09.2021 To 30.09.2021</p> <p>04.10.2021 To 12.10.2021</p>	<p>PPT presentation for Memory Management Topic</p>	
4	<p>Unit IV File and Disk Management</p> <p>File Systems: Files, directories, file system & Directories implementation, file-system management and optimization, File Allocation</p>	<p>07</p>	<p>13.10.2021 To</p>	<p>PPT Presentation on File Management and Disk Management</p>	<p>Activity based Unit</p>

	Methods MS-DOS file system, UNIX V7 file system Disk Structure ,Disk Scheduling Algorithm (FCFS, RAID, Network Operating System, Real Time Operating System, Distributed Operating System	08	22.10.2021 23.10.2021 To 02.11.2021	Used E-white Board for problem solving.	test-II
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Course: Logical Reasoning and Personality Development (B. Voc-TY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit I Quantitative Aptitude I HCF and LCM, Square Root and Cube Root, Average, Problem on Ages, Ratio and Proportion, Partnership, Percentage, Discount, Profit and Loss Problems on Trains, Time and Distance, Time and Work, Boats and Streams, Simple Interest, Compound Interest, Area, Surds and Indices, Volume and Surface Area,	05 05	07.07.2021 To 15.07.2021 16.07.2021 To 28.07.2021 29.07.2021 To	PPT presentation for Aptitude and Using E-White Board for Solving the Mathematical Problems	

	Communication Skills and Listening Skills 1) Group Discussion 2) Debate 3)Extempore 4)Seminar 5) Effective presentations. Interview Skills		09.10.2021		
4	<p>Unit IV Stress and Time Management and Motivation</p> <p>Stress: Introduction to Stress, Causes of Stress, Impact Management Stress, Managing Stress, Building self-esteem and self-confidence. Time: Time as a Resource, Identify Important Time Management Wasters, Individual Time Management Styles, Techniques for better Time Management.</p> <p>Motivation: Introduction to Motivation, Relevance and types of Motivation, Motivating the subordinates, Analysis of Motivation</p>	07	13.10.2021 To 22.10.2021	PPT Presentation and motivational Videos	Activity Based Unit Test-II
		08	23.10.2021 To 02.11.2021		

Course: Kotlin Programming (B. Voc-TY)

1. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	<p>Unit I Introduction to Kotlin</p> <p>Introduction, Overview, Environment Setup, Basic Syntax, Architecture, Variable, Datatypes, Operator, Conditional statements, Loops, Enum. Array- Generic Array, Arrays of Primitives, Create an Array, Create an array using closure, Create an uninitialized array.</p> <p>String- String Equality, String Literals, Elements of string. Kotlin Application-Kotlin on server side, Kotlin on Android. Functions- Definition, Recursive Function, Default and Named Argument, Higher order function,</p>	05	05.07.2021 To 12.07.2021	PPT presentation of Kotlin Programming	--
		05	13.07.2021 To 22.07.2021		

	<p>Inline function, Vararg parameter in function, Basic Lambdas.</p> <p>Ranges- Integral types Ranges, downTo() function, step() function, until function</p>	05	26.07.2021 To 03.08.2021		
2	<p>Unit II Classes and Objects</p> <p>Defining Class Hierarchies-Class, Visibility Modifiers, Inner and nested classes, Inheritance. Declaring a Class with nontrivial constructor or properties: Primary Constructor and initializer blocks, Secondary constructor, initializing the superclass in different ways, implementing properties declared in interfaces.</p> <p>Compiler-generated methods: Universal object methods, Data Classes, Class Delegation. Declaring an instance- Object Declaration: Singleton Objects, Annotations</p>	07	04.08.2021 To 23.08.2021	PPT presentation of Classes and Objects in Kotlin Programming.	Unit Test-I
		08	24.08.2021 To 07.09.2021		
3	<p>Unit III Exception Handling and Null Safety</p> <p>Exception Handling: Introduction, try catch, Multiple catch Block, Nested try-catch block, finally Block, throw keyword</p> <p>Null Safety: Nullable Types and Non-Nullable Types, Smart cast, Unsafe and Safe Cast Operator, Elvis Operator</p>	08	08.09.2021 To 14.09.2021	PPT presentation on Exceptional Handling and Null Safety	
		07	15.09.2021 To 25.09.2021		

4	<p>Unit IV Kotlin for Android</p> <p>Why use Kotlin on android? Kotlin on Android, Setting up kotlin for android, Using Kotlin in Android Studio</p> <p>Auto-Generated Gradle Configuration, Converting Java Code to Kotlin, APP #1: A TO-DO List app</p>	08	27.09.2021 To 13.10.2021	PPT Presentation on Kotlin for Android	Activity based Unit test-II
		07	14.10.2021 To 02.11.2021		

2	<p>Unit II Process Management</p> <p>System view of the process and resources, initiating the OS, process address space, critical section, process abstraction, resource abstraction</p> <p>process hierarchy, Thread model Scheduling: Scheduling Mechanisms, Strategy selection, non-preemptive and preemptive strategies, Deadlock</p>	06	12.08.2021 To 21.08.2021		Unit test-I
3	<p>Unit III Memory Management</p> <p>Mapping address space to memory space, memory allocation strategies, fixed partition, variable partition</p> <p>Paging, virtual memory, Demand Paged, Segment Memory Management</p>	05	09.09.2021 To 18.09.2021.04	PPT presentation on Memory Management	
4	<p>Unit IV Device and Information Management System</p> <p>Techniques for Device management, Device management characteristics, Channels and control units Device allocation consideration</p> <p>A simple file system, General model of a file system, Symbolic File System, Basic</p>	05	01.10.2021 To 09.10.2021	PPT Presentation on Device and information management in operating system	Activity based Unit Test- II
		05	21.10.2021 To 02.11.2021		

	File System.				
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**Name of the Teacher
and Signature**

Head of Department

Principal

Rajarshi Shahu Mahavidyalaya, (Autonomous), Latur

Department of Computer Science

Teaching Plan (Semester-VI, IV)

(Dec-2021 to April-2022)

Name of the Teacher: Mrs. Latoriya Pooja S.

1. Details of Classes to be taught:

Sr. No.	Class	Subject	Course code and Title	Total Lectures
1.	B. Voc. (CT) FY	Computer Technology	Mathematical Foundation (CT.GE.201)	60
2.	B. Voc. (CT) TY	Computer Technology	Android Application Development using Kotlin (CT.SC.601)	60
3.	M.Sc. (CS) FY	Computer Science	Numerical Methods (P-NUM-	60
4.	M.Sc. (CS) SY	Computer Science	Advanced Java Programming (M.Sc.CS-CC-10)	60

Course: Android Application Development using Kotlin (CT.SC.601) (B.Voc-TY)

2. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	<p>Unit I:Kotlin OOPs</p> <p>Kotlin OOPs: Class and Object, Nested and Inner Class,</p> <p>Kotlin: Constructor ,Visibility Modifier,</p> <p>Kotlin Inheritance :Abstract Class, Kotlin Interface , Data Class, Sealed Class</p>	<p>05</p> <p>05</p> <p>05</p>	<p>17.12.2021 to 24.12.2021</p> <p>25.12.2021 to 1.01.2022</p> <p>03.01.2022 to 10.01.2022</p>	<p>Use of Black board and Projector Presentation</p>	
2	<p>Unit II Android Startup and kotlin Android</p> <p>Install Android Studio, The Activity And The User Interface</p> <p>Extract: Activity & UI Building The UI and a Calculator App</p> <p>Extract: starting with A First App, Android Events</p>	<p>05</p> <p>05</p> <p>05</p>	<p>11.01.2022 to 21.01.2022</p> <p>22.01.2022 to 29.01.2022</p> <p>31.01.2022 to 07.02.2022</p>	<p>Use of Black board and Projector Presentation and Smart Board for graphical presentation</p>	Unit Test-I
3	<p>Unit III Basic Controls and Layouts</p> <p>Basic Controls: Extract Basic Controls, Extract More Controls</p> <p>Layout Containers: Extract Layouts – LinearLayout</p> <p>The Constraint Layout:</p>	<p>06</p> <p>05</p>	<p>08.02.2022 to 15.02.2022</p> <p>18.02.2022 to 26.02.2022</p> <p>28.02.2022 to</p>	<p>Use of Black board and Projector Presentation</p>	

	Extract Bias & Chains	06	11.03.2022		
4	Unit IV:Menus and Other Controls Programming The UI: Extract Programming the UI, Extract Layouts and Auto naming Components, Menus & The Action Bar, Menus, Context & Popup, Spinners, Pickers	07	12.03.2022 to 28.03.2022	Use of Black board and Projector Presentation and Smart Board for graphical presentation	Unit Test-II
		08	29.03.2022 to 13.04.2022		
5	Revision	04	15.04.2022 to 16.04.2022		

Course: Advance Java Programming (M.Sc.CS-CC-10)
(M.Sc. - SY)

2. Summary of Lesson Plan

Sr. No.	Unit and Chapter to be covered	Expected No. of Lectures	Date	Academic activities to be organized	No. of Test / Assignment with topic and date
1	<p>Unit I: Introduction and Object Oriented Programming</p> <p>Programming language Types and Paradigms, Computer Programming Hierarchy, How Computer Architecture Affects a Language? , Why Java? Flavors of Java, Java Designing Goal, Role of Java Programmer in Industry, Features of Java Language</p> <p>JVM –The heart of Java, Java’s Magic Byte code. Installing Java, Java Program Development, Java Source File Structure, Compilation, Executions</p> <p>Seminar</p> <p>Object Oriented Programming Class Fundamentals , Object & Object reference , Object Life time & Garbage Collection, Creating and Operating Objects , Constructor & initialization code block, Access Control, Modifiers, methods Nested ,</p>	<p>05</p> <p>05</p> <p>05</p>	<p>17.12.2021 to 24.12.2021</p> <p>25.12.2021 to 30.12.2021</p> <p>31.12.2021</p> <p>01.01.2022 to 07.01.2022</p>	<p>Use of Black board and Projector</p> <p>Presentation and also the use of smart board for programming</p>	

	<p>Inner Class & Anonymous Classes, Abstract Class & Interfaces Defining Methods, Argument Passing Mechanism, Method Overloading, Recursion, Dealing with Static Members, Finalize() Method, Native Method.</p> <p>Seminar</p>		08.01.2022		
2	<p>Unit II: Extending Classes Inheritance and Packages</p> <p>Use and Benefits of Inheritance in OOP, Types of Inheritance in Java, Inheriting Data members and Methods, Role of Constructors in inheritance, Overriding Super Class Methods, Use of "super"</p> <p>Seminar</p> <p>Package Organizing Classes and Interfaces in Packages, Package as Access Protection, Defining Package, CLASSPATH Setting for Packages, Naming Convention For Packages.</p> <p>Seminar</p>	07	10.01.2022 to 20.01.2022		Unit Test -I
		08	21.01.2022	Use of Black board and smart board. Also the use of projector for the graphical presentation	
			22.01.2022 to 03.02.2022		
			04.02.2022		
3	<p>Unit-III: Exception handling, Thread and GUI Programming</p> <p>Exception Handling</p> <p>The Idea behind Exception, Exceptions & Errors, Types of Exception, Control Flow In</p>		05.02.2022 to	Use of Black board and smart board. Also the use of	--

	<p>Exceptions, JVM reaction to Exceptions ,Use of try, catch, finally, throw, throws in Exception Handling ,In-built and User Defined Exceptions, Checked and Un-Checked Exceptions.</p> <p>Seminar</p> <p>Thread: Understanding Threads, Needs of Multi-Threaded Programming, Thread Life-Cycle, Thread Priorities ,Synchronizing Threads, Inter Communication of Threads ,Critical Factor in Thread –Dead Locks</p> <p>Seminar</p> <p>GUI Programming Designing Graphical User Interfaces in Java, Components and Containers, Basics of Components, Using Containers, Layout Managers, AWT Components, Adding a Menu to Window, Extending GUI Features Using Swing Components, Java Utilities (java.util Package) The Collection Framework: Collections of Objects, Collection Types, Sets, Sequence, Map, Understanding Hashing, Use of Array List & Vector.nit-IV</p> <p>Seminar</p>	05	12.02.2022	projector for the graphical presentation	
		05	14.02.2022		
		05	15.02.2022 to 23.02.2022		
			24.02.2022		
		05	25.02.2022 to 04.03.2022		
			05.03.2022		
4	<p>Unit IV: Event Handling, JDBC and Servlets</p> <p>Event Handling Event-Driven Programming in Java, Event- Handling Process, Event-Handling Mechanism, The</p>			Use of Black board and smart board. Also the use of projector for the graphical presentation	

	<p>Delegation Model of Event Handling, Event Classes, Event Sources, Event Listeners, Adapter Classes as Helper Classes in Event Handling.</p> <p>Seminar</p> <p>Database Programming using JDBC Introduction to JDBC, JDBC Drivers & Architecture, CRUD operation Using JDBC, Connecting to non-conventional Databases.</p> <p>Seminar</p> <p>Java Server Technologies Servlet Web Application Basics, Architecture and challenges of Web Application, Introduction to servlet, Servlet life cycle, Developing and Deploying Servlets, Exploring Deployment, Descriptor (web.xml), Handling Request and Response.</p> <p>Seminar</p> <p>Revision</p> <p>Final Seminar</p>	<p>05</p> <p>05</p> <p>05</p>	<p>07.03.2022 to 14.03.2022</p> <p>15.03.2022</p> <p>16.03.2022to 23.03.2022</p> <p>24.03.2022</p> <p>25.03.2022 to 01.04.2022</p> <p>04.04.2022</p> <p>05.04.2022 to 11.04.2022</p> <p>12.04.2022 to 16.04.2022</p>		<p>Activity Based Unit Test-II</p>
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Name of the Teacher
And Signature

Head of Department

Principal

