

AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYURU.

An Autonomous college with in the jurisdiction of Krishna University A.P, India.

(With Effect from Academic Year 2019-'20)

COMPUTER SCIENCE	CSC-301C	2019-20	B.Sc.(MPCs, MCCs.)
SEMESTER – III	PAPER – III	Max. Marks 70	Pass Marks 28

Syllabus **OBJECT ORIENTED PROGRAMMING USING JAVA** **Total Hrs: 60**
NO. Of. Hours: 4 **Credits: 3**

UNIT-I

15Hrs

Fundamentals of Object – Oriented Programming: Introduction, Object Oriented paradigm, Basic Concepts of OOP, Benefits of OOP, Applications of OOP, Java features: **Overview of Java Language:** Introduction, Simple Java program structure, Java tokens, Java Statements, Implementing a Java Program, Java Virtual Machine, Command line arguments. **Constants, Variables & Data Types:** Introduction, Constants, Variables, Data Types, Declaration of Variables, Giving Value to Variables, Scope of variables, Symbolic Constants, Type casting, Getting Value of Variables, Standard Default values; **Operators & Expressions.**

UNIT-II

15 Hrs

Decision Making & Branching: Introduction, Decision making with if statement, Simple if statement, if-Else statement, Nesting of if-else statements, the else if ladder, the switch statement, the conditional operator. **Looping:** Introduction, While statement, do-while statement, for statement, Jumps in loops. **Classes, Objects & Methods:** Introduction, Defining a class, Adding variables, Adding methods, Creating objects, Accessing class members, Constructors, Method overloading, Static members, Nesting of methods;

UNIT-III

10 Hrs

Inheritance: Extending a Class, Overriding Methods, Final Variables and Methods, Final Classes, Abstract Methods and Classes; **Arrays, Strings And Vectors:** Arrays, One-dimensional arrays, Creating an array, Two – dimensional arrays, Strings, Vectors, Wrapper classes; **Interfaces: Multiple Inheritance:** Introduction, Defining interfaces, Extending interfaces, Implementing interfaces, Assessing interface variables;

UNIT-IV

10 Hrs

Multithreaded Programming: Introduction, Creating Threads, Extending the Threads, Stopping and Blocking a Thread, Lifecycle of a Thread, Using Thread Methods, Thread Exceptions, Thread Priority, Synchronization, Implementing the 'Runnable' Interface.

Managing Errors And Exceptions: Types of errors: Compile-time errors, Runtime errors, Exceptions, Exception handling, Multiple Catch Statements, Using finally statement,

UNIT-V

10 Hrs

Applet Programming: local and remote applets, Applets and Applications, Building Applet code, Applet Life cycle: Initialization state, Running state, Idle or stopped state, Dead state, Display state. **Packages:** Introduction, Java API Packages, Using System Packages, Naming conventions, Creating Packages, Accessing a Package, using a Package. **Managing Input/ Output Files in Java:** Introduction, Concept of Streams, Stream classes, Byte Stream Classes, Input Stream Classes, Output Stream Classes, Character Stream classes: Reader stream classes, Writer Stream classes, Using Streams;

Prescribed Text Book:

1. E.Balaguruswamy, Programming with JAVA, A primer, 3e, TATA McGraw-Hill Company.

Reference Books

1. Programming In Java By Sachin Malhotra And Saurabh Choudhary From Oxford University Press
2. Object Oriented Programming Through Java by P. Radha Krishna, Universities Press
3. John R. Hubbard, Programming with Java, Second Edition, Schaum's outline Series,
4. Deitel & Deitel. Java TM: How to Program, PHI (2007)
5. Java Programming: From Problem Analysis to Program Design- D.S Mallik

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SEMESTER – III**PAPER – III****Max. Marks 70****Pass Marks 28****MODEL PAPER****OBJECT ORIENTED PROGRAMMING USING JAVA****NO Of Hours: 4****Credits: 3****Total Hrs: 60****Section- A****Answer FOUR Questions. Each Question carries FIVE Marks.****4*5=20M**

1. Explain the structure of a java program?
2. Explain different data types in java?
3. Explain about Constructors?
4. Differences between arrays and vectors?
5. Explain about Exception handling?
6. Explain the applet life cycle?

Section- B**Answer FIVE the Questions. Each Question carries TEN Marks****5*10=50M**

7. Explain the Concepts of Object Oriented Programming?
8. Explain java Features?
9. Explain Looping statements with example
10. Explain Method overloading with an example program
11. Explain about inheritance
12. Explain the concept of interface?
13. Explain life cycle of a thread?
14. Explain about Byte Stream Classes?

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SEMESTER – III

PAPER – III

Max. Marks 70

Guidelines for paper setting '**OBJECT ORIENTED PROGRAMMING USING JAVA**'

Unit wise weightage of Marks

	Section-A (Short answer questions)	Section-B (essay questions)
Unit-1	2	2
Unit-2	1	2
Unit-3	1	2
Unit-4	1	1
Unit-5	1	1

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

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SEMESTER – III

PAPER – III

Max. Marks 50

Lab List OBJECT ORIENTED PROGRAMMING USING JAVA Pass Marks 25

No. of Hours per week: 2 External: 25 Internal: 25 Credits: 2

1. Write a program to perform various String Operations
2. Write a program to print the given number is Armstrong or not?
3. Prompt for the cost and selling price of an article and display the profit (or) loss
4. Write a program to print the numbers given by command line arguments
5. Write a program on class and object in java
6. Illustrate the method overriding in JAVA
7. Write a program to find the Simple Interest using Multilevel Inheritance
8. Write a program to display matrix multiplication.
9. Write a program to implement Exception handling
10. Write a program to create packages in Java
11. Write a program on interface in java
12. Write a program to Create Multiple Threads in Java
13. Write a program to Write Applets to draw the various polygons
14. Write a program to assign priorities to threads in java
15. Write an Applet Program to design a Simple Calculator.

