

**JYOTI NIVAS COLLEGE AUTONOMOUS  
SYLLABUS FOR 2018 BATCH AND THEREAFTER**

**Programme: B.Sc.**

**Semester: III**

**COMPUTER SCIENCE - III**

**OOPS USING JAVA and INTERNET TECHNOLOGY**

**Course Code: 18IICS3**

**No. of Hours: 60**

**COURSE OBJECTIVES:**

- An ability to understand the features of Java, difference between Java and, C and C++.
- An ability to understand the concept of object oriented concepts and usage of interfaces, packages, threads and working with files in java.
- To acquire knowledge and Skills for creation of Web Site considering both client side programming.
- To create Web application using tools and techniques used in industry.
- Design a basic web site using HTML5 and CSS3 and Javascript to demonstrate responsive web design.

**LEARNING OUTCOMES:**

- Ability to understand the importance and advantages of java over other programming languages such as C and C++.
- It will develop a capability to use the object oriented concepts in development of java applications.
- Design and develop basic web pages using HTML and CSS.

**UNIT I**

**(12 HRS)**

**Introduction to Java** – Features of Java – How Java differs from C and C++ - Java and Internet – Data types – Variables – Arrays – Operators – Control statements.

**Classes – Objects – Constructors** – this-Garbage Collection, finalize method, Overloading

**UNIT II**

**(14 HRS)**

**Access control** – Understanding static and fixed methods – Introducing final – Inner classes – Inheritance – Overriding.

**Packages** – Access protection – Importing packages – Interfaces - Exception handling – Thread synchronization – Runnable interface – Deadlock

**UNIT III**

**(06 HRS)**

**Files:** Introduction – Concept of streams – Stream classes – Using streams- I/O classes – File class – I/O Exceptions – creation of files – Reading/Writing characters/Bytes – Handling primitive data types – Random Access files.

## UNIT- IV

(16 HRS)

**Basic Internet Concepts:** History, Components, Security, Protocols, Internet Addressing, DNS and directory services.

**Internet Applications:** Electronic mail, News groups, UUCP, FTP and Telnet.

**World Wide Web:** Overview, Hyper Text Markup Language, Uniform Resource Locator, HTTP, common Gateway Interface, Multipurpose Internet mail extensions, Web browsers, Search engines.

## UNIT V

(12 HRS)

**HTML:** Introduction, Lists in HTML, Ordered and unordered Lists, Directory Lists, Hyperlinks, HTML tables, Frames, HTML forms.

**JavaScript** – Introduction – Features of JavaScript - Comparison of JavaScript and Java - Data types, Operators, Control Structures, Functions.

## REFERENCE

1. Patrick Naughton and Herbert Schildt .*The Complete Reference Java 2*. TMH Publication. 5<sup>th</sup> Edition.
2. E. Balaguruswamy. *Programming with Java*. Tata McGraw-Hill Publishing Co. Ltd.. 2<sup>nd</sup> Edition
3. C. Xavier. *Worldwide Design with HTML*. Tata McGraw Hill Publishing Company Limited 2008.
4. John Ducket. *Beginning HTML,XHTML,CSS and JavaScript*. Wiley Publishing, Inc 2014.

## COMPUTER SCIENCE III

### OOPS USING JAVA and INTERNET TECHNOLOGY – LAB

**No. of Hours: 45**

#### COURSE OBJECTIVES:

- To implement object oriented concepts and usage of interfaces, packages, threads and working with files in java.
- To create Web application using tools and techniques used in industry.
- To Design a basic web site using HTML5 and CSS3 to demonstrate responsive web design.

#### LEARNING OUTCOMES:

- To develop knowledge and Skills for creation of Web Sites.
- To create Web applications using tools and techniques used in industry.
- Design a basic web site using HTML5 and CSS3 and JavaScript to demonstrate responsive web design.

## **PART- A**

### **JAVA**

1. To implement constructor overloading.
2. To implement static variables and methods.
3. To implement Inheritance.
4. To implement method overriding.
5. To implement interface.
6. To implement DividebyZero and ArrayIndexOutOfBounds Exceptions.
7. To implement multi-threading with the use of multiplication tables. Three threads must be defined and each one must create one multiplication table: they are 5 tables, 7 tables, 13 tables.
8. To read contents and display the number of lines in a file.

## **PART-B**

### **INTERNET\_TECHNOLOGY**

1. Resume
2. College Detail
3. Website Hyperlink
4. Application form
5. Mark statement
6. Time table
7. Nested frame
8. Password checking using Java Script