Programme	Course Code(s)	Title
MCA	**16MA307**	**Practical –JAVA PROGRAMMING LAB**

Course Objective   : To enable the students to understand the principles and practice of object oriented programming and design in the construction of robust, maintainable programs which satisfy their requirements;

Expected Level of Output: Working Level

Department offered: Computer Applications

Course Inputs:

Ex.	Description	Text Book	Chapter	Practical Hours
I	**Name:** Introduction to IDE- Object and Class **Input: P**roblem Requirement **Functions to be used: Class creation** **Expected Output:** Usage of class	A	1	3
II	**Name:** Control and Decision statements,Arrays and strings **Input: P**roblem Requirement **Functions to be used:** array and string processing **Expected Output:** String handling	A	2	3
III	**Name:** Polymorphism, Abstract Class. **Input: P**roblem Requirement **Functions to be used:** Polymorphism **Expected Output:** Overloading and dynamic method	A	3	3
IV	**Name:** Inheritance **Input: P**roblem Requirement **Functions to be used: Single, multilevel** **Expected Output:Usage of Inheritance**	A	4	3

V	**Name:** Interface and Package. **Input: P**roblem Requirement **Functions to be used:** Multiple inheritance and packages **Expected Output:** Package	**A**	**5**	**3**
VI	**Name:** Collections **Input: P**roblem Requirement **Functions to be used:** Objects iterations **Expected Output:** Collection of objects	**A**	**6**	**3**
VII	**Name:** Exception Handing **Input: P**roblem Requirement **Functions to be used:** Using exceptions **Expected Output:** User defined exceptions	**A**	**7**	**3**
VIII	**Name:**I/O andFile handing **Input: P**roblem Requirement with I/O **Functions to be used:** Char/Byte Streams **Output:** File handling	**A**	**8**	**3**
IX	**Name:**.Multithreading**.** **Input: P**roblem Requirement **Functions to be used:**thread creations **Expected Output:** Thread handling	**A**	**9**	**3**
X	**Name:** GUI application(swing/ awt) **Input: P**roblem Requirement **Functions to be used: component and events** **Expected Output:** Interactive designing	**A**	**10**	**3**
XI	**Name: Open learning-** Application Development **Input:Real world problem** **Functions to be used: Java classes** **Expected Output:** Package	**A**	**11**	**3**
	Total Hours			33

Software essential: Java & Eclipse or Netbeans IDE

Text Book(s):

  A. H.Schildt-Java :The Complete Reference – Ninth Edition,TMH 2014.

Reference Books:

1.K. Arnold and J. Gosling - The Java Programming Language - Second Edition, Addison Wesley, 1996.
2. Cay S.Horstmann, Gary Cornell - Core Java 2 Volume I Fundamentals,5th Edn. PHI,2000.