

MANGALORE UNIVERSITY

DEPARTMENT OF M.Sc. COMPUTER SCIENCE

MASTER OF COMPUTER APPLICATIONS (MCA) PROGRAMME

MCAS 305 :ADVANCED JAVA PROGRAMMING		
Hours/Week: 4 Credits : 4		I.A. Marks: 30 Exams. Marks: 70
<u>Course Outcomes:</u> CO1: Implement Object Oriented programming concept using basic syntaxes of control Structures, strings and function for developing skills of logic building activity. CO2: Demonstrate understanding and use of different exception handling mechanisms and concept of multithreading for robust faster and efficient application development. CO3: Learn to access database through Java programs, using Java Data Base Connectivity (JDBC). CO4: Students will also be exposed to advanced topics including multithreading, internet networking, and JDBC database connectivity. CO5: Develop server side programs in the form of servlets.		
	UNIT-I	12 Hours
Java 2 Enterprise Edition Overview: Overview of J2EE. Java Database Connectivity (JDBC): The Concept of JDBC; JDBC Driver Types; JDBC Packages; A Brief Overview of the JDBC Process; Database Connection; Statement Objects; ResultSet; Transaction Processing; Metadata, Data Types; Exceptions.		
	UNIT-II	12 Hours
Networking: Basics, Useful Classes and Interfaces, InetAddress, Sockets, URI, URL, URLConnection, HttpURLConnection, Datagrams. Java Beans: Introduction, Advantages, Introspection, Bound and Constrained Properties, Persistence, Customizers, Java Beans API.		
	UNIT-III	12 Hours
Servlets: Background, Life Cycle, Development Options, Tomcat, Example, Servlet API, Reading Parameters, javax.servlet.http Package, Handling HTTP Requests and Responses, Using Cookies, Session Tracking. Java Server Pages (JSP): JSP; JSP Tags; Tomcat; Request String; User Sessions; Cookies; Session Objects.		

	UNIT-IV	12 Hours
Enterprise Java Beans: Enterprise Java Beans; Deployment Descriptors; Session Java Bean; Entity Java Bean; Message-Driven Bean; The JAR File. Hibernate: Persistence, Problems in Object/Relational Mapping, Object/Relational Mapping and Java Persistence API; Introduction to Hibernate, Creating a JPA Project.		
REFERENCE BOOKS: 1. Jim Keogh, J2EE - The Complete Reference, Tata McGraw Hill, 2008. 2. Herbert Schildt, Java - The Complete Reference, McGraw Hill Education, 2014, 9th Edition. 3. Gavin King et.al., Java Persistence with Hibernate, Manning Publications, 2016, 2nd Edition. 4. Cameron McKenzie, Hibernate Made Easy, Pulp java, 2008 5. Phil Hanna, JSP 2.0: The Complete Reference, Osborne		

