PROGRAMMING FOR MOBILE AND REMOTE COMPUTERS				
CLASS T.E. (INFORMATION TECHNOLOGY) SEMESTER VI				
HOURS PER WEEK	LECTURES	:	04	
	TUTORIALS	:	--	
	PRACTICALS	:	02	
			HOURS	**MARKS**
EVALUATION SYSTEM:	THEORY		3	100
	PRACTICAL		--	25
	ORAL		--	--
	TERM WORK		--	25

1. Java EE 5: An Overview

Enterprise Architecture Types, Goals of Enterprise Applications. Introducing the Java EE Platform, Features of Java EE 5, The Runtime Infrastructure, Java EE 5 APIs, Architecture of Java EE 5, Describing Java EE Containers, Developing Java EE 5 Applications, Exploring Probable Java EE Application Architectures, Application Development and Deployment Roles

2. Java EE Related Technologies

Java Database Connectivity, Servlets, JavaServer Pages, Java Server Faces, JavaMail, Enterprise JavaBeans, Hibernate, Seam, Java EE Connector Architecture, Web Services, Struts, Spring, JAAS, AJAX

3. Web Applications and Java EE 5

Exploring the HTTP Protocol, Components of a Web Application, Structure /Modules of Web Applications, Describing Web Containers, Types of Web Containers, Building Web Applications, Applications with Basic HTML pages, Applications with Basic JSP Pages and Servlets, Applications with Modular Components, EJB-Centric Applications

4. Understanding J2ME

Configurations, Connected Device Configuration, Connected Limited Device Configuration, Profiles, Current Profiles, Mobile Information Device Profile, Platform Standardization, Anatomy of MIDP Applications, Advantages of MIDP, Portability, Security, MIDP Vendors, Fragmentation

5. Building MIDlets

Tooling Up, Debugging Your MIDlets, Creating Source Code, Compiling a Midlet. Preverifying Class Files, Sun's J2ME Wireless Toolkit Devices, Running MIDlets Using the Emulator Controls, Tour of MIDP Features, It's Java MIDlet Life Cycle, Generalized User Interface, The Likelihood of Server –Side Components, Packaging your Application, Manifest Information, Creating a MIDlet Descriptor, Using an Obfuscator, Using Ant, Running on a Real Device

6. MIDlets

The MIDlet Life Cycle, Requesting A Wakeup Call, A Bridge to the Outside World, Packaging MIDlets, MIDlet Manifest Information, Application Descriptor, MIDlet Properties, MIDlet Suite Security, Permissions, Protection Domains, Permission Types, Permissions in MIDlet Suite Descriptors, No Floating Point In CLDC 1.0, Java . Lang, No Object Finalization, No Reflection, No Native Methods, No User Classloading, Multithreading, String and String Buffer, Math, Runtime and System, Streams In Java io

7. Creating User Interface

The View from the Top, Using Display, Event Handling with Commands Creating Command, Responding to Commands Lists And Forms:_Using Lists, Understanding List Types, Event Handling for IMPLICIT Lists, Creating List, about Image, Editing a List, Working with List Selection Custom Items:_Introducing Custom items, Custom item Painting, Showing, Hiding and Sizing Handling Events

8. Wireless Messaging Api

Bluetooth and Obex, Programming a Custom User Interface, the Game API, 3d Graphic, Sound, Music, and Video: MMAPI

1. Sing Li Jonathan Knudsen, "Beginning J2me From Novice to Professional", 3rd edition , Apress, Isbn No: 978-81-8128-292-7
2. Kogent Solutions Inc, J2EE 1.4 PROJECTS
3. James Keogh , "The Complete Reference J2ME", Tata McGraw Hill. ISBN -10: 0-07-053415-2
4. Jim Keogh, "The Complete Reference J2EE", Tata McGraw Hill. ISBN -10: 0-07-052912-4

References

1. Asoke Talukder, "Mobile Computing Technology, Application and Services Concepts", Tata McGraw Hill.
2. Riggs, "Programming Wireless Devices with Java 2 platform", 2nd Eition, Pearson Education.
3. Yaun, "Enterprise J2ME: Developing Mobile Java Application", Pearson.

Term Work

Term work shall consist of at least 10 experiments covering all topics and at least one written test.

Marks

1. Attendance (Theory and Practical) 05 Marks
2. Laboratory work (Experiments and Journal) 10 Marks
3. Test (at least one) 10 Marks

The final certification and acceptance of Term Work ensures the satisfactory performance of laboratory Work and Minimum Passing in the term work.

Suggested List of Experiments

J2EE

1. Editing, debugging and execution of any one of the project incorporated in the text book J2EE 1.4 PROJECTS preferably- **project III: online shopping site**

J2ME

1. Creation of simple J2ME Midlet
2. Illustration of low level API using Cancas
3. Use of kepresses
4. Use of high level components
5. Use of RMS
6. Creating custom items and performing various operations like painting, showing, hiding and sizing.
7. Mixing 3D graphics, sound, music, video as applicable