SITA1601	MOBILE APPLICATION DEVELOPMENT	L	T	P	Credits	Total Marks
		3	0	0	3	100

COURSE OBJECTIVES

- To understand basic concepts of mobile technologies, different operating systems and how to work with Android.
- To develop applications for current and emerging mobile computing devices, performing tasks at all stages of the software development life-cycle.
- To learn how to code with objective C programming.
- To design, implement and deploy mobile applications for iOS.
- To design, implement and deploy mobile applications for windows OS.

UNIT 1 INTRODUCTION **9 Hrs.**

Introduction to mobile technologies, mobile operation systems - pros and cons, Introduction to Android, Features, Architecture, UI Widgets and Events handling, Layouts, Application structure, Android Manifest file, Creating Android applications.

UNIT 2 BUILDING BLOCKS AND DATABASES **9 Hrs.**

Introduction to Activities and Intents - **Understanding Activity life cycle,** Linking Activities, Passing Data, **Toast,** Displaying a Dialog Window and Notifications. **Content Provider,** Services, Broadcast receivers, accessing databases, Location and sensors, Multimedia audio, video and camera, Deploying and publishing application.

UNIT 3 OBJECTIVE C PROGRAMMING **9 Hrs.**

Objective C - **Objects and Classes,** Property, Messaging, Categories and Extensions, Fast Enumeration - **NSArray, NS Dictionary,** Methods and Selectors, Static & Dynamic objects, **Exception handling**, Memory management, Swift language essentials: Arrays, Dictionaries, functions.

UNIT 4 INTRODUCTION TO IOS **9 Hrs.**

Introduction to iPhone, **MVC Architecture,** View Controller - Building the UI and Event handling, Application life cycle, Tab Bars, **Story Boards and Navigation Controllers,** Table View, Push Notification, **Database handling,** Introduction to icloud, Webkit framework in iOS8, Deploying and publishing application.

UNIT 5 WINDOWS MOBILE APP DEVELOPMENT **9 Hrs.**

Introduction to Windows Phone 8, **Application Life cycle,** UI Designing and events, Building, Files and Storage, Network Communication, Push Notification, Background Agents, **Maps and Locations,** Data Access and storage, Introduction to silverlight and XAML, Data Binding, Deploying and Publishing.

Max. 45 Hrs.

COURSE OUTCOMES

On completion of the course, student will be able to

CO1 - Understand the technologies and business trends impacting mobile applications.
CO2 - Understand and remember the components of android, iOS and Windows mobile applications.
CO3 - Learn the programming languages and techniques for developing mobile applications.
CO4 - Develop mobile applications with compelling user interface and database connectivity for real time applications for iOS.
CO5 - Deploy mobile applications with compelling user interface and database connectivity for real time applications for Windows OS.
CO6 - Develop and deploy mobile applications using silverlight.

TEXT / REFERENCE BOOKS

1. Reto Meier, “Professional Android Application Development”, Wrox, 2010.
2. http://www.tutorialspoint.com/android/index.htm
3. http://developer.android.com/training/index.html
4. Stephen G. Kochan, “Programming in Objective C”, Dorling Kindersley India Pvt. Ltd, 2012.
5. David Mark, Jack Nutting and Jeff LaMarche, “Beginning iOS 6 Development Exploring the iOS SDK”, Apress, 2013.
6. Henry Lee, Eugene Chuvyrov, “ Beginning Windows Phone App Development”, Apress 2012.

END SEMESTER EXAMINATION QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration:3 Hrs.**

PART A: 10 Questions carrying 2 marks each – No choice **20 Marks**

PART B: 2 Questions from each unit of internal choice, each carrying 16 marks **80 Marks**