Mobile App Development	L	P	C
	3		3

Discipline(s) / EAE / OAE	Semester	Group	Sub-group	Paper Code
EAE	7	FSD-EAE	FSD-EAE-4	FSD-437T

Marking Scheme:
1. Teachers Continuous Evaluation: 25 marks
2. Term end Theory Examinations: 75 marks

Instructions for paper setter:
1. There should be 9 questions in the term end examinations question paper.
2. The first (1st) question should be compulsory and cover the entire syllabus. This question should be objective, single line answers or short answer type question of total 15 marks.
3. Apart from question 1 which is compulsory, rest of the paper shall consist of 4 units as per the syllabus. Every unit shall have two questions covering the corresponding unit of the syllabus. However, the student shall be asked to attempt only one of the two questions in the unit. Individual questions may contain upto 5 sub-parts / sub-questions. Each Unit shall have a marks weightage of 15.
4. The questions are to be framed keeping in view the learning outcomes of the course / paper. The standard / level of the questions to be asked should be at the level of the prescribed textbook.
5. The requirement of (scientific) calculators / log-tables / data – tables may be specified if required.

Course Objectives :

1.	To introduce students the fundamentals of mobile app development and its significance in the digital era.
2.	To familiarize students with the Android and iOS platforms as key mobile app development platforms.
3.	To provide students with hands-on experience in designing, developing, testing, and deploying mobile applications.
4.	To expose students to advanced subjects in mobile app development, such as cross-platform development and upcoming trends.

Course Outcomes (CO)

CO 1	Understand the importance, principles of mobile app development, Identify and explain the characteristics and features of the Android and iOS platforms.
CO 2	Develop mobile applications using programming languages relevant to the platforms and design user-friendly and visually appealing mobile app interfaces.
CO 3	Implement data storage, synchronization, and location-based services in mobile apps. Test and debug mobile applications for optimal performance and functionality.
CO 4	Demonstrate knowledge and understanding of cross-platform app development frameworks and Stay updated with emerging trends and future directions in mobile app development.

Course Outcomes (CO) to Programme Outcomes (PO) mapping (scale 1: low, 2: Medium, 3: High)

	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08	PO09	PO10	PO11	PO12
CO 1	3	2	1	1	1	2	-	3	-	1	2	3
CO 2	3	2	1	1	1	2	-	3	-	1	2	3
CO 3	3	2	1	1	1	2	-	3	-	1	2	3
CO 4	3	2	1	1	1	2	-	3	-	1	2	3

UNIT I

Introduction to Mobile App Development: Overview, history, and importance, Mobile platforms and operating systems: Android and iOS, Mobile app development tools and environments, Introduction to programming languages for mobile app development

User Interface Design and Development: User interface (UI) design principles for mobile apps, UI components and layouts, designing for multiple screen sizes and resolutions, Implementing navigation and user interaction

UNIT II

Mobile App Development Technologies: Mobile app architecture and components, Backend integration and API consumption, Data storage and synchronization, Location-based services and mapping.

UNIT III

Mobile App Testing and Deployment: Testing methodologies for mobile apps, Debugging and error handling, App store submission and deployment process, App performance optimization and analytics

UNIT IV

Advances Topics in Mobile App Development: Mobile app security and privacy considerations, InCross-platform app development frameworks (e.g., React Native, Flutter), Emerging trends and future directions in mobile app development.

Textbooks:

1." Android Programming: The Big Nerd Ranch Guide" by Bill Phillips and Chris Stewart
2. "iOS Programming: The Big Nerd Ranch Guide" by Christian Keur and Aaron Hillegass
3. "Head First Android Development: A Brain-Friendly Guide" by Dawn Griffiths and David Griffiths
4. "Beginning iOS Cloud and Database Development: Build Data-Driven Cloud Apps for iOS" by Thomas P. Fitzpatrick

Reference Books:

1. "Learning Swift: Building Apps for macOS, iOS, and Beyond" by Jonathon Manning, Paris Buttfield-Addison, and Tim Nugent
2. "Beginning Android Programming with Kotlin" by Jerome DiMarzio
3. "Designing Interfaces: Patterns for Effective Interaction Design" by Jenifer Tidwell
4. "iOS Human Interface Guidelines: Creating a Great User Experience" by Apple Inc.
5. "Android Studio Development Essentials: Android 10 Edition" by Neil Smyth
6. "Test-Driven Development with Python" by Harry Percival
7. "Mobile App Development with React Native: Build iOS and Android Apps with JavaScript" by Johnathan Horton and Muhammed Murtaza
8. "Mobile Design and Development: Practical concepts and techniques for creating mobile sites and web apps" by Brian Fling