

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Question Paper Code: R5I03**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

Fifth Semester

CSE (Internet of things)

R21UIO503-WEB AND MOBILE APPLICATION DEVELOPEMENT

(Regulations R2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is meant by mobile application development? CO1- U
2. How does HTTPS help in mobile app security? CO2-App
3. Implement push notifications using native development CO2-App
4. Explain the term "platform-specific code" in native apps. CO1-U
5. Differentiate between Java and Kotlin in Android development. CO 1- U
6. Define the Android app lifecycle. CO 1- U
7. Mention a key feature of Ionic. CO 1- U
8. How does a hybrid app reduce development costs? CO2- App
9. What does JWT stand for? CO1-U
10. What is the role of a client in client-server architecture? CO1- U

PART – B (5 x 16= 80 Marks)

11. (a) Explain the basic differences between web applications and mobile applications with suitable examples. CO1- U (16)
- Or
- (b) Explain the common architectural patterns used in mobile apps (like MVC, MVVM). Use diagrams if needed. CO1- U (16)

12. (a) Demonstrate how a transport booking mobile app integrates core functionalities such as real-time vehicle tracking, push notifications, and secure payment transactions. CO2- App (16)
- Or
- (b) Apply your understanding to explain how a banking app benefits from being a native app. CO2- App (16)
13. (a) Develop a java-based Android app to perform addition of two numbers. Show code and output. CO2- App (16)
- Or
- (b) Design a simple React Native app that displays product details (name, price, image). CO2- App (16)
14. (a) Build a sample Hybrid App screen using HTML5, CSS3, and JavaScript for a Registration form (Name, Email, Password). CO2-App (16)
- Or
- (b) Design a Cordova app that displays a welcome message on both Android and iOS platforms. CO2- App (16)
15. (a) Apply the concept of JWT (JSON Web Token) to implement secure user sessions in a mobile app. Write the structure of a JWT and explain how it prevents unauthorized access. CO2- App (16)
- Or
- (b) Apply security practices to design a secure payment application. Show how data can be protected during login and transaction phases. CO2-App (16)