

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech Winter 2024 - 25 Examination

Semester: 6

Date: 29-11-2024

Subject Code: 203105359

Time: 02:00 pm to 04:30pm

Subject Name: Mobile Application Development

Total Marks: 60

Instructions:

1. This question paper comprises of two sections. Write answer of both the sections in separate answer books.
2. From Section A, **Q.1 is compulsory, attempt any THREE from Q. 2 to Q. 5**
3. From Section B, **Q.1 is compulsory, attempt any THREE from Q. 1 to Q. 5**
4. Make suitable assumptions wherever necessary.
5. Start new question on new page.

Section-A (30 Marks)					
Q.1	Objective Type Questions - (State, Define, List, etc) (All are compulsory and each of two marks)	(6)	CO	PO	Bloom's Taxonomy
	1. Define Android Studio.		1	1	1
	2. List the different mobile platforms		1	1	1
	3. State the lifecycle stages of an Android Activity.		2	2	1
Q.2	Answer the following questions.				
	A) Explain the role of the Android Manifest file in app development	(2)	1	1	2
	B) Illustrate the Model-View-ViewModel (MVVM) architecture with a diagram and describe its components	(6)	3	3	3
Q.3	Answer the following questions.				
	A) Differentiate between ConstraintLayout and LinearLayout.	(2)	2	2	2
	B) Write a sample code snippet for uploading data to Firebase Storage in an Android application.	(6)	4	4	3
Q.4	Answer the following questions.				
	A) Define Room DB in Android.	(2)	3	3	2
	B) Explain the steps involved in publishing an app on the Google Play Store.	(6)	5	5	3
Q.5	Answer the following questions.				
	A) Describe the role of a Fragment in Android applications.	(2)	2	2	2
	B) Explain how to use Firebase for real-time database integration in Android.	(6)	4	4	3
Section-B (30 Marks)					
Q.1	Objective Type Questions - (State, Define, List, etc) (All are compulsory and each of two marks)	(6)			
	1. Define Retrofit and its role in API integration.		5	6	1
	2. List the programming languages primarily used for developing applications on the Android platform		5	5	1
	3. Which mobile platform is known for its customization options and open-source nature?		4	4	1
Q.2	Answer the following questions.				
	A) Explain the purpose of Firebase Cloud Firestore.	(2)	4	4	2

	B) Describe the Android architecture.	(6)	5	5	2
Q.3	Answer the following questions.				
	A) What is the use of SharedPreferences in Android apps?	(2)	3	3	2
	B) Describe what Gradle is and its purpose	(6)	4	4	3
Q.4	Answer the following questions.				
	A) What is the role of the Linux kernel in the Android OS?	(2)	3	3	2
	B) Describe the Android project folder structure.	(6)	3	4	2
Q.5	Answer the following questions.				
	A) What is an intent, and how many types are there? Describe with examples.	(2)	4	5	3
	B) Describe the purpose and roles of activity lifecycle methods.	(6)	3	4	3