Program: B.Tech. (Batch 2018 onward)

Semester: 7th /8th

Name of Subject: Mobile Application Development

Subject Code: PEIT-116

Paper ID: 17414

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) Parts A and B are compulsory
2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice
3) Any missing data may be assumed appropriately

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Part – A   **[Marks: 02 each]**

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Q1.

a) Identify and categorize different types of mobile applications, such as native, web, and hybrid apps.

b) What is the root element of an Android XML layout file, and why is it important?

c) What is the purpose of using fragments in Android app development?

d) Explain the role of the Activity class in an Android app.

e) Create a string resource for a welcome message that can be displayed to the user.

f) Can you name some common lifecycle methods of an Android Fragment?

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Part – B   **[Marks: 04 each]**

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Q2. What are the key stages or steps involved in the process life cycle, and can you briefly describe each stage?

Q3. What is Traceview, and how is it typically used in Android app development to analyze and optimize code performance?

Q4. What is the primary purpose of the built-in SQLite content provider in Android, and how is it typically used in app development?Provide an overview of what Android Studio is and its role in the Android app development process

Q5. What is the purpose of the AndroidManifest.xml file in an Android application, and where is it typically located within the project's directory structure.

Q6. Develop a user interface that utilizes Button elements to interact with various app functions, ensuring an intuitive user experience.

Q7. Describe various methods of facilitating communication between Fragments within the app and discuss the situations in which each method is most appropriate.

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Part – C   **[Marks: 12 each]**

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Q8. Explain how the Android Context class is utilized in an Android application. Provide specific examples of situations where different types of Context (e.g., Application Context, Activity Context) should be used, and justify your choice for each scenario. Additionally, discuss the potential risks of using the wrong type of Context and the impact it can have on the app's functionality.

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OR

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Compare the advantages and disadvantages of Relative, Linear, Table, and Grid Layouts in different Android app design scenarios.

Q9. Imagine you are developing a mobile app that involves handling various user interactions through event listeners. Explain the importance of designing efficient event handling mechanisms to ensure a smooth user experience. Provide examples of common events and how you would implement event listeners to respond to these events effectively. Discuss any potential challenges in event handling and strategies to address them.

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OR

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Design a step-by-step process for creating a user interface from scratch in an Android app, including considerations for layout and user experience.

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