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Question Paper Code:R5202

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

Fifth Semester

Computer Science Engineering

R21UCS502 – MOBILE APPLICATIONS DESIGN AND DEVELOPMENT

(Common to Information Technology)

(Regulations R2021)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Differentiate Implicit and Explicit Intents.   CO1- U

2. Suppose that there are two activities in an application named Activity One and   CO1- U
    Activity Two. You want to invoke Activity Two from Activity One. What code
    you will write?

3. What is Menu? What are the types of menu?   CO1- U

4. What is Intent with broadcast receiver?   CO1- U

5. How do you create a basic button in Flutter that prints "Clicked" when pressed?   CO1- U

6. Distinguish between var, final, and const in Dart.   CO1- U

7. What is the purpose of Animation Controller in Flutter?   CO1- U

8. Mention the steps to add an external package in Flutter   CO1- U

9. What is Cursor class? How it is used?   CO1- U

10. What is Firebase Real time Database?   CO1- U

PART – B (5 x 16= 80 Marks)

11. (a) Write a code to create a Dashboard using Grid Layout.   CO2-App   (16)

<center>Or</center>

(b) How do you use XML to define dialog or Popup window in android ?What are the best practices for organizing and structuring XML layout files in Android?   CO2-App   (16)

12. (a) Write a code to Create an android application to send an EMAIL using Intent Filter.   CO2-App   (16)

<center>Or</center>

(b) Write a code to create a Location distance tracking app that contains the following features: CO2-App   (16)
  - Display user current location on the map.
  - Animate the user marker on a map when the current location changed.

Calculate the distance with Google Distance Matrix API

13. (a) Design and implement a Flutter UI for a simple user registration form with input fields for name, email, and password. Include validation for empty fields and show how you would handle user input. Provide the code and explain your widget choices.   CO2-App   (16)

<center>Or</center>

(b) Develop a Flutter UI for a login screen with text fields for username and password, including basic validation. Explain your widget choices and state management approach.   CO2-App   (16)

14. (a) Explain the different types of animations available in Flutter with examples.   CO1- U   (16)

<center>Or</center>

(b) Explain how to integrate and use a REST API service in Flutter.   CO1- U   (16)

15. (a) Develop an app to store and retrieve the employee details (Employee id, name,and address) using SQLite database .   CO2-App   (16)

<center>Or</center>

(b) Write a code snippet to read and write data to the firebase realtime database.   CO2-App   (16)