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Question Paper Code: U5202

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Fifth Semester

Computer Science Engineering

21UCS502 MOBILE APPLICATIONS DESIGN AND DEVELOPMENT

(Common to Information technology)

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

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| 1. What is meant by Android Widget? | CO1-U |
| 2. Distinguish between Implicit and Explicit Intents. | CO1-U |
| 3. Differentiate View and ViewGroup with suitable example. | CO1-U |
| 4. What is Menu? What are the types of menu? | CO1-U |
| 5. Write any two advantages and disadvantages of using location Service. | CO1-U |
| 6. What is meant by geocoding? | CO1-U |
| 7. What is Bluetooth? How it differs from WiFi? | CO1-U |
| 8. How to fire Intent to take pictures? | CO1-U |
| 9. Write a code to fetch the data using firebase | CO1-U |
| 10. What is a Cursor class? How it is used? | CO1-U |

PART – B (5 x 16= 80 Marks)

11. (a) Create a login page that contains the following components: CO2-App (16)
- The app logo
 - Username and password text fields
 - Login button
 - Reset password link
 - Remember me option
 - Forgot password field

Or

- (b) Create a BMI calculator app for android that: CO2-App (16)
- Captures weight and height with EditText widgets.
 - Contains a class that uses the Singleton Pattern and contains the calculation logic for BMI
 - Uses a Toggle Button to support calculation of BMI with both the metric and imperial measurement systems.
 - Displays the calculated BMI and categorization of the BMI inside a CardView widget
12. (a) Describe the process of starting a new Activity using an Intent. What are the essential components of an Intent for this purpose? CO1-U (16)
- Or
- (b) How do you implement a menu in an Android app? Describe the steps involved and the key components required. CO1-U (16)
13. (a) How can we use geo-location services and real-time tracking to enhance the map-related features in our app? What benefits does this bring to our users? CO1-U (16)
- Or
- (b) What factors should mobile app developers consider when deciding to integrate maps into the application? How do these decisions impact user engagement and utility? CO1-U (16)
14. (a) Charles wishes to create a dedicated application for alerting/notifying the user whenever he receives the message. Also enable him to customize the notification option to enable and disable based on his needs, also to setup the tone for alert/notify him upon receiving a message CO2-App (16)
- Or
- (b) Develop an android application that captures image from a camera by defining a file provider, granting permissions to URI, storage and camera and manage result and show image through image view. CO2-App (16)

15. (a) A department head is in need of faculty details such as ID, Name, Contact No, Designation, Email ID and the same to be stored and fetched from the database. Develop an APP to do the following operations can be done by the department head. CO2-App (16)

- Enable the department head to create new faculty details
- Update the faculty details when it is required
- Delete the faculty details when it is required
- Retrieve the faculty details by inputting their name

Or

(b) Create your own content provider to add customer's record in a database and to ask Content Provider to give us those records back. CO2-App (16)

