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Roll No.

TBC-501

B. C. A. (FIFTH SEMESTER)

END SEMESTER

EXAMINATION, Dec., 2023

ANDROID PROGRAMMING

Time : Three Hours

Maximum Marks : 100

Note : (i) All questions are compulsory.

(ii) Answer any *two* sub-questions among (a), (b) and (c) in each main question.

(iii) Total marks in each main question are **twenty.**

(iv) Each sub-question carries 10 marks.

1. (a) Discuss android's architecture with a suitable diagram. (CO1)

(b) Discuss the file/folder hierarchy under android studio project. (CO1)

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(2)

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- (c) Define the purpose of native and hybrid application. Also discuss its advantages as well as its limitations. (CO1)
- 2. (a) What are Event Handlers and Event Listeners ? List out various Event Handlers and Listeners with example. (CO2)
- (b) Discuss android's activity life cycle with a suitable code. (CO2)
- (c) What do you mean by the terms View and ViewGroup ? Discuss its elements. (CO2)
- 3. (a) Compare and contrast between RelativeLayout and ConstraintLayout. Which is more suitable to be implemented while developing an application. (CO3)
- (b) Write the code to develop an alert dialog on button click. Display positive and negative buttons as "SUBMIT" and "CANCEL". Required action should be performed on any button click. (CO3)

(3)

- (c) What are the Intents ? Write a code to input a URL from the user and jump to that address on button click. (CO3)
- 4. (a) Define SQLite Databases. Explain with example CRUD operations performed on data. (CO4)
- (b) Discuss SQLiteOpenHelper class with its significance while developing an application. (CO4)
- (c) Write the code to input some data from the user and perform insertion and retrieval of data using SQLite Database. (CO4)
- 5. (a) Discuss the TelephonyManager and SmsManager class. Discuss the significance while performing calling/messaging. (CO5)
- (b) Discuss the need of sensors in android app development. What are its types ? (CO5)
- (c) Write the code to display in-built sensors of a device. (CO5)

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