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## Sixth Semester B.E. Degree Examination, July/August 2022

### Mobile Application Development

Time: 3 hrs.

Max. Marks: 100

**Note:** Answer any FIVE full questions, choosing ONE full question from each module.

#### Module-1

- 1 a. Explain with a neat diagram Model View Presenter Architecture pattern. (05 Marks)
- b. Write a test case for adding two numbers using JUnit 4. (05 Marks)
- c. Define Intent. Explain different types of Intent. Also explain with code snippet how to pass data between activities with intent using Intent Data. (10 Marks)

OR

- 2 a. Explain Activity life cycle with neat diagram. Also explain the different callback methods used in activity life cycle with coding snippet. (10 Marks)
- b. List and explain the challenges of Android App development. (05 Marks)
- c. Explain Activity navigation with an example. (05 Marks)

#### Module-2

- 3 a. Explain different types of Button and its states. (04 Marks)
- b. Explain button-listener design pattern with neat diagram. (06 Marks)
- c. What is Spinner? How to create spinner and its adapter? Explain with an example. (10 Marks)

OR

- 4 a. What are steps required for floating context menu? Explain with necessary coding snippet. (10 Marks)
- b. What is Material Design? Explain the different material Design features available in Android Studio. (06 Marks)
- c. Explain four different functional areas of App bar. (04 Marks)

#### Module-3

- 5 a. Explain with an example the usage of AsyncTask with connecting to Internet and downloading data. (10 Marks)
- b. What is the purpose of Broadcast Intent? Explain the different types of Broadcast Intent? Explain the two ways of registering the broadcast receiver. (10 Marks)

OR

- 6 a. Define Services. Explain the service life cycle with call back methods. And also differentiate started service and bound service. (10 Marks)
- b. Explain the steps involved in creating and setting notification? Also explain the various optional components used with notifications. (10 Marks)

**Module-4**

- 7 a. What is shared preferences? How to create save, restore and clear shared preference? Explain with an example. (10 Marks)  
b. Define content provider. Explain with an example sharing the data between application using content provider. And also mention the advantages of content provider. (10 Marks)

**OR**

- 8 a. Define transaction. Explain ACID properties. (05 Marks)  
b. List the steps to implement SQLite database. (05 Marks)  
c. Explain the steps required to implement a Cursor loader with example. (10 Marks)

**Module-5**

- 9 a. Explain the different monetization models to make money from your application. (08 Marks)  
b. Explain the steps to implement the Addmob in application. (10 Marks)  
c. List the difference in permission model with respect to before and after marshmallow. (02 Marks)

**OR**

- 10 a. Explain the steps involved in preparing App for release. (10 Marks)  
b. With an example, explain firebase real time database and how the data is stored in it. Explain indetail Reading and writing data in firebase console and in an app. (10 Marks)

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