Roll No.: \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

Amrita Vishwa Vidyapeetham

Amrita School of Engineering, Coimbatore

B.Tech. End Semester Examinations – April 2019

Sixth Semester

Computer Science and Engineering

15CSE375 Android Application Development

Time: Three hours Maximum: 100 Marks

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| **CO** | **Course Outcomes** |
| CO01 | Understand the fundamental concepts of android operating system and android application development. |
| CO02 | Understand the various building blocks of native android applications. |
| CO03 | Design android specific user interface (UI) |
| CO04 | Design and develop applications using android services and sensors |
| CO05 | Understand and apply data storage and sharing techniques for applications. |

**Answer all questions**

**Part – A**

**(Theory - 30 Marks)**

1. Describe the use of the specified folder / files in android studio / application:

[6] [CO1]

1. drawable/
2. raw/
3. R
4. emulator
5. strings.xml
6. dimens.xml

2. Explain the working of Broadcast receiver and list the started service lifecycle methods.

[6] [CO2]

3. How are the following components used in an android application? [6] [CO3]

a. Intents

b. AndroidManifest

4. List and explain the various classes and interfaces used in accessing sensors on an android device. [6] [CO4]

5. What are the possible ways to store key-value pairs in android? Explain with examples.

[6] [CO5]

**Part – B**

**(Lab - 70 Marks)**

Design a Contacts Management application with the following features :

6. a. *Add Contacts Activity* – Get the name, mobile number and emailid with “Add”, “Show” and “Cancel” buttons. (3)

b. The activity should have the following validation – name, mobile number – should not be empty. Name should contain only characters, mobile number should accept only 10 digits and email should be in valid format. (4)

c. Clicking on “Cancel” should clear all the fields. Clicking on “Show” should take the user to “List\_Contacts” activity. (3)

[10] [CO3]

7. a. Design an appropriate SQLite database table to store the Contact details. (5)

b. On clicking the ‘Add’ button, the name, mobile number and email should get saved in the database. (5)

[10] [CO5]

8. a. *List Contacts activity* – This should display all the contact names added in the database in a list view. Add three buttons named “Import”, “Call/SMS” and “Share”. (5)

b. On selecting a contact name, toast the contact name, mobile number and email from the database. (5)

[10] [CO5]

9. a. Clicking on the “Import” button should take the user to ‘*Import*’ activity. (2)

b. In this activity, display the list of contacts from the android contacts application using contacts content provider / resolver. (8) [10] [CO2]

10. a. On clicking “Call/SMS” button, take the user to “CallSMS” activity. (2)

b. In the “*CallSMS” activity*, add two edittexts (message and number) and two buttons “Call” and “SMS”. The user can enter a mobile number and on clicking “Call” the app should place a call directly to the number entered by the user. On clicking “SMS”, the app should be able to send the content entered in the “message” box to the mobile number entered in “number” box. (8)

[10] [CO3]

11. a. Clicking on “Share” button, should take the user to “*Share Activity*”. (2)

b. In the “Share” activity, read and display the current location latitude and longitude from the GPS of the device. Swiping left to right on the location, display a toast “Location is near”. Swiping right to left on the location, display a toast “Location is far”. (8)

[10] [CO4]

12. Change the Share\_activity background to red color if the current temperature of the device is greater than 25 degree celcius and will change the background to blue if the temperature is less than 25 degree celcius. [10] [CO4]

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