Reg. No.									

Manipal Institute of Technology
MANIPAL

Constituent Institute of Manipal University

V SEMESTER B.TECH COMPUTER SCIENCE & ENGG.
END SEMESTER EXAMINATIONS, NOV 2017
SUBJECT : MOBILE APPLICATION DEVELOPMENT(CSE 4027)
REVISED CREDIT SYSTEM
DATE: 22-11-2017

TIME:03 HOURS MAX.MARKS : 50

Instructions to Candidates:

- Answer **ALL** questions.
- All the code has to be written.
- Missing data, if any, may be suitably assumed.

1A. Explain Hybrid App Development approach. **2M**

1B. DFL Air Cargo company would like to develop an Android App for customers. Customers need to install the app and register with their details. **4M**

The details to be filled during registration include email address(mandatory), password(mandatory), retype password(mandatory), Name(mandatory), Address(mandatory), Gender(mandatory), Phone number(optional), and an optional alert message notification option. Design a layout for the registration. After submitting the Register button check whether all fields are entered or not. If not display the error message, otherwise show the welcome screen.

1C. Design and develop an App which has an activity which houses the following items in a list. Long clicking on the item should show a menu "Delete". On clicking delete menu the corresponding item has to be removed from the list. i. Item 1 **4M**
ii. Item 2
iii. Item 3
iv. Item 4
v. Item 5
vi. Item 6

2A. Draw the Android Platform Stack. **2M**

2B. There are three music files named rahman.mp3, roja.mp3 and bombay.mp3. Create an App which houses three buttons titled "Start Music", "Stop Music" and "Next Music". On clicking Start Music button should start playing the current music, on clicking Stop Music button should stop playing the current music and on clicking Next Music should play the next music in cyclic fashion. Write all the Java code. **5M**

2C. Explain how a call can be made to a telephone number in android ? List and explain the different approaches. **3M**

3A. Explain where and how to place an array of strings as a resource with example. **2M**

3B. Design and develop an App which houses a checkbox, a text box for number, another text box for message and a button. On clicking the button should check for the Check box. If the checkbox is checked, then a SMS message has to be sent to the telephone number as in the textbox. If the checkbox is not checked, then the message is not sent. Write the XML and Java code. **4M**

3C. Develop an App having one activity with a button and a image view. On clicking the button should load a image in a background thread from the following URL. After downloading the image the image should be displayed on the image view. Show all the code. https://manipal.edu/dam/manipal/mu/images/banner/mu-acadamic-lp.jpg **4M**

4A. Assume there is a array named countries. Write code for creating a spinner named sp, containing the array. **2M**

4B. Design and develop an App which has two text boxes and a button. The first text box contains the absolute path of a file existing in the device. The second text box contains the path of a new file to be created. On clicking the button should copy the file from the source file(as mentioned in first text box) to destination file(as mentioned in the second text box). Write the Java code. Also write the appropriate validation code and message. **4M**

4C. Explain the following functions of SQLiteDatabase with syntax and example. **4M**

- **i.** execSQL
- **ii.** query
- **iii.** rawQuery
- **iv.** delete

5A. Create a custom view class, which has two circles of diameter 30 and 50 and a square of width 50. The first circle has to be drawn using Anti-alias turned off and the second anti-alias turned on. The first circle has to be filled with blue colour and the second with green. The rectangle should be filled with black colour. Assume the centre position for first circle as 30,30 and the second circle 100,100 and for rectange 150,150. Write all the code. **3M**

5B. Explain the various types of sensors and sensors available in an Android phone. Explain the steps to detect all sensors in a device. **3M**

5C. There are three textboxes and one button in android. User will enter any number in first two textboxes and clicks on the button. The system will calculate the product of two numbers and displays in the third textbox. Write a Unit testing code for this in android. **4M**