



Course Code: IT-6113

Course Title: Mobile Application Development

Marks: 60

Time: 3 Hours

Answer any FIVE questions

All parts of a particular question must be answered consecutively

- 1(a) Android is an OS, an open source and a platform - explain why? 4
- (b) Draw the Android architecture and write the main component used in an Android application. 4
- (c) Make a list of Android platform version, code name with their API level. 4
- 2(a) What is listener? Write down some common listener events in Android. 4
- (b) What's the difference between class, method and activity in android? 4
- (c) Interpret the following android code line by line. 4
- ```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
 android:layout_width="fill_parent"
 android:layout_height="fill_parent"
 android:orientation="vertical">

 <TextView android:id="@+id/text"
 android:textColor="#0832ca"

 android:textSize="30dp"
 android:textAllCaps="false"

 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:text="Hello, I am a Programmer" />

</LinearLayout>
```
- 3(a) Write about an Android Emulator or AVD with its features and limitations. 4
- (b) Write the necessary XML and Java codes for designing a simple calculator. 4
- (c) Describe the following folders and files of Android. 4
- |                                                       |                                                            |
|-------------------------------------------------------|------------------------------------------------------------|
| <input checked="" type="checkbox"/> res               | <input checked="" type="checkbox"/> Text Fields (EditText) |
| <input checked="" type="checkbox"/> drawable          | <input checked="" type="checkbox"/> Plain Text             |
| <input checked="" type="checkbox"/> layout            | <input checked="" type="checkbox"/> Password               |
| <input checked="" type="checkbox"/> activity_main.xml | <input checked="" type="checkbox"/> Password (Numeric)     |
| <input checked="" type="checkbox"/> mipmap            | <input checked="" type="checkbox"/> E-mail                 |
| <input checked="" type="checkbox"/> values            | <input checked="" type="checkbox"/> Phone                  |
|                                                       | <input checked="" type="checkbox"/> Postal Address         |
- 4(a) What is Android Layout? Briefly describe different types of Layout with respective image/diagram. 4
- (b) With example explain the following properties of Layout: orientation, gravity, layout\_weight, weightSum, alignParentRight. 4
- (c) Differentiate between Linear and Relative Layout? 4



- 5(a) Define listener and handler with example. What is the difference between listener and handler? 5
- (b) What is Toast in Android? 3  
Explain the following code(s):
- Toast toast= Toast.makeText(MainActivity.this, "Jahangirnagar University",  
Toast.LENGTH\_SHORT);  
toast.setGravity(Gravity.CENTER,0,0);  
toast.show();
  - private EditText write;  
ttobj=new TextToSpeech(getApplicationContext(), new TextToSpeech.OnInitListener() {  
@Override  
public void onInit(int status) {  
}  
});
- (c) Interpret the following android terms. 4
- android.os.Bundle
  - onClick(View view)
  - findViewById(int id)
  - android:layout\_width="fill\_parent"
  - android:orientation="vertical"
- 6(a) Write some features of Android. Explain Eclipse IDE and Android Development Tools (ADT) Plug-in with their purpose in Android. 5
- (b) Explain Activity Lifecycle used in Android (use necessary code and diagram). 5
- (c) Write the key differences between 4G and 5G mobile devices. 2
- 7(a) How to send the data from one Activity to Another Activity in Android applications- explain step by step. 4
- (b) Differentiate between: 6
- Intent and Service
  - Widget and OpenGL
  - JDK and IDEs
  - Adapter and Receiver
  - SnackBar and Toasts