



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

P.O. Box 62157

00200 Nairobi - KENYA

Telephone: 891601-6

MAIN EXAMINATION

JANUARY – APRIL 2019 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER AND LIBRARY SCIENCE

REGULAR PROGRAMME

CMT 314:MOBILE PROGRAMMING

Date: APRIL 2019

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) Define the following terms;
- i) Explicit intent **(2 Marks)**
 - ii) Kotlin **(2 Marks)**
- b) i) State **FOUR** key components of android architecture **(2 Marks)**
- ii) Identify **TWO** main features available android **(2 Marks)**
- iii) Evaluate **FOUR** merits of android runtime environment. **(2 Marks)**
- c) Explain how rendering error can be solved in android studio. **(2 Marks)**
- d) Explain the scope of the android code as used below **(2 Marks)**

```
public class MainActivity extends AppCompatActivity {  
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);
```

- e) Explain any **THREE** types of notifications available in android **(3 Marks)**
- f) Give **TWO** roles of a content provider in android. **(2 Marks)**

- h) Discuss **TWO** different storages available in android giving each an example. **(2 Marks)**
- g) Show how you would navigate from one activity to another using an Intent **(4 Marks)**
- h) State any **TWO** methods associated with the WebView class. **(2 Marks)**
- i) Highlight **TWO** factors that should may be considered when developing an application. **(3Marks)**
- Q2. 1. Differentiate between a ListView class to the GridView class **(4 Marks)**
2. Give **FOUR** reasons as to why you would use multithreads in App design **(4 Marks)**
3. Highlight **FOUR** major concerns you have when developing for mobile phones as opposed to when developing for computers. **(4 Marks)**
4. Why do you think platforms like iOS may not dominate the android platform. **(3 Marks)**
5. Describe a simple nine-patch images tool in android development **(5 Marks)**
- Q3. 1. Differentiate option menus from context menus. **(4 Marks)**
2. Differentiate a *content provider* from a *broadcast receiver*. Describe a scenario where you would use each **(4 Marks)**
3. Explain how an activity that is destroyed differs from one that is stopped **(3 Marks)**
4. Mention any **THREE** disadvantages of using threads in App development **(3 Marks)**
5. Explain **TWO** ways android tracks all applications process. **(4 Marks)**
6. State **FOUR** impotent folders in android tool environment **(2 Marks)**
- Q4. 1. With the help of a diagram, describe the activity life cycle of an android application **(4 Marks)**
2. State **FOUR** widgets you would use to display a large set of data in your android application. **(4 Marks)**

3. Describe the difference between *SharedPreferences* and *SQLite* in terms of the nature of data that you would store in each **(4 Marks)**
4. While using *RelativeLayout* parent container, specify any **THREE** properties you would set in the XML file **(3 Marks)**
5. Discuss the key function of the following in main activity main **(5 Marks)**

```
Intent intent =newIntent(this,MyTestActivity.class);    startActivity(intent);
```

- Q5.
1. Write an android Toast application code that would be useful to execution a simple Toast notification to user **(5 Marks)**
 2. Explain **THREE** reasons why you can't run byte code in android **(6 Marks)**
 3. Evaluate any **FOUR** commons exceptions in android. **(4 Marks)**
 4. Identify **TWO** function of using XML files in android studio. **(3 Marks)**
 5. Explain how you can add an image icon in android layout **(2 Marks)**

END