



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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**MAIN EXAMINATION**

**JANUARY – APRIL 2018 TRIMESTER**

**FACULTY OF SCIENCE**

**DEPARTMENT OF COMPUTER AND LIBRARY SCIENCE**

**REGULAR PROGRAMME**

**CMT 314: MOBILE APPLICATION DEVELOPMENT**

**Date: APRIL 2018**

**Duration: 2 Hours**

**INSTRUCTIONS: Answer Question ONE and any other TWO Questions**

- Q1. a) The android design below is login application for PHPMYSQL component. Create and execute the application using Android studio or Eclipse IDE nm **(12 marks)**



- i) Using the above relation, describe the THREE factors when designing an application. **(3 marks)**

ii) What language does android support to develop an application?  
**(2 marks)**

b) The union and intersection operations are said to be communicative.  
Explain. **(3 marks)**

Q2. a) i) Describe the concept exhibited in the code below **(5 marks)**

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

ii) A class was evaluate sub-activites. Describe how do you pass  
the data to sub-activities android? **(2 marks)**

b) Define application Widgets in android? Describe how it can be  
embedded in other applications **(5 marks)**

c) Of the functions described in your answer to question 2(b) above, describe  
how a user can translate data in Android? **(4 marks)**

d) Discuss FOUR common features of android software. **(4 marks)**

Q3. a) Explain the meaning of content provider. Give an example to  
illustrate your answer in creating application. **(3 marks)**

b) Consider the following definition –

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
<stringname="hello">bitmap class!</string>  
</resources>
```

i) Explain the purpose of the code used from above. **(3 marks)**

ii) State two purpose of a resource in android development.  
**(2 marks)**

iii) Explain how android track the application on process?  
**(4 marks)**

c) Describe the history of android development and its API versions.  
**(8 marks)**

Q4. a) Describe the following terms;

i) Explicit intent **(2 marks)**

ii) List picker **(2 marks)**

b) i) State FOUR key components of android architecture **(4 marks)**

ii) Describe FOUR main features available android workbench.

iii) Evaluate four merits of android runtime environment. **(4 marks)**

c) How many DIALOG BOXES do support in android? Explain them.  
**(4 marks)**

d) Explain the scope of intent filter of the coding used below. **(4marks)**

```
<intent-filter>  
<actionandroid:name="android.intent.action.MAIN"/>  
<categoryandroid:name="android.intent.category.LAUNCHER"/>  
</intent-filter>
```

Q5. a) Explain the following terms

i) Implicit intent **(2 marks)**

ii) Evaluate the role of view Group in android **(2 marks)**

iii) What is singleton class in android? **(2 marks)**

iv) Describe the event activity codes below. Provide an example to illustrate your answer **(6 marks)**

```
/** Called when the activity is first created. */  
  
public void onCreate(Bundle savedInstanceState) {  
  
    super.onCreate(savedInstanceState);  
  
    setContentView(R.layout.activity_main);  
  
    Log.d(msg, "The onCreate() event")  
}
```

- ii) Explain ONE way in which user can share preferences in android?  
**(2 marks)**
- v) Android storage is useful in grandle files. State different storages available in android  
**(4 marks)**
- vi) Differentiate the role of linear layout and relative layout in context with user interface.  
**(2 marks)**

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