

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**CIT 2253 MOBILE APP DEVELOPMENT MAIN EXAM**  
**Mobile app development - Examination**  
**Answer question one and any two**

**Question 1 (30 marks)**

1. Provide the definition of the following terms
  - I. Activity (2 marks)
  - II. Service (2 marks)
  - III. Broadcast receiver (2 marks)
  - IV. Content provider (2 marks)
2. Define what android is (2 marks)
3. Provide a list of any four features of android (2 marks)
4. What do you understand by the term JDK? (2 marks)
5. Enumerate the four android application components. (2 marks)
6. What do you understand by the following terms?
  - I. Layouts (2 marks)
  - II. Fragment (2 marks)
  - III. Views (2 marks)
7. With the knowledge acquired in class, provide a brief explanation of the strings.xml file with an example (4 marks)
8. Using knowledge learnt in android programming solve. A school has following rules for grading system:
  - a. Below 25 - F
  - b. 25 to 45 - E
  - c. 45 to 50 - D
  - d. 50 to 60 - C
  - e. 60 to 80 - B
  - f. Above 80 - A

Ask user to enter marks and print the corresponding grade (4 marks)

**Question 2 (20 marks)**

1. Provide a well labelled diagram of a service lifecycle (6 marks)
2. Provide a brief description for each of the following service callback methods
  - I. onStartCommand () (2 marks)
  - II. onBind() (2 marks)
  - III. onCreate() (2 marks)
  - IV. onDestroy() (2 marks)
3. What do you understand by the term fragment? (2 marks)
4. Write a java program that accepts user input from the keyboard and does the following operations sum, difference, division and product (4 marks)

**Question three (20 marks)**

1. Provide a brief description of the resource types of the following directories
  - I. res/ (2 marks)
  - II. Drawable/ (2 marks)
  - III. Layout/ (2 marks)
  - IV. Anim/ (2 marks)
2. Eliminate the errors in the following xml code (3 marks)

```
<?xml version="1.0" encoding="utf-8"?>
<resources
  <color name="opaque_red">#f00
  <string name="hello">Hello!</string>
</>
```
3. Define a content URI? Write the correct format of a content URI (2 mark)

4. State any two characteristics of a fragment
5. Write the android hello world program

(4 marks)

(3 marks)

**Question 4 (20 marks)**

1. write the xml code to produce a login page with the follow elements.(10 marks)  
    textfield-name  
    textfield-password  
    submit button  
    cancel button.
2. write java codes to show how the following classes are inherited from their main class in android programming.
  - I. services (2 marks)
  - II. activity (2 marks)
  - III. broadcast receiver (2 marks)
  - IV. content providers (2 marks)
  - V. fragments (2 marks)