THE CO-OPERATIVE UNIVERSITY OF KENYA

END OF SEMESTER EXAMINATION DECEMBER -2022

EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE, INFORMATION TECHNOLOGY
(YR III SEM I)

UNIT CODE: BCSC 3158

UNIT TITLE: MOBILE APPLICATION DEVELOPMENT

DATE: MONDAY, 19TH DECEMBER, 2022

TIME: 9:00 AM – 11:00 AM

INSTRUCTIONS:
- **Answer question ONE (compulsory) and any other TWO questions**

QUESTION ONE
(a) 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)

(b) Write down the basic components of an Android app?   (4 Marks)
(c) Enlist the steps to publish the Android application.   (5 Marks)
(d) List all attributes to develop a simple button.   (5 Marks)
(e) Define services in Android operating system.   (2 Marks)
(f) Write a directory path where images are stored while developing Android applications.
                                                                                        (2 Marks)
(g) List all the components of UI tool kit?   (2 Marks)
(h) How is java API used in Mobile application?   (2 Marks)

QUESTION TWO
(a)   Describe android application architecture in detail.   (10 Marks)
(b)   Discuss the need of permission in Android.   (2 Marks)
(c)   Describe the permissions to set system functionalities like Bluetooth, Camera.
        .   (3 Marks)
(d)   State and explain the Android features.   (5 Marks)

QUESTION THREE
(a) Write notes on mobile application development framework.   (8 Marks)
(b) State FIVE security issues in mobile application development.   (5 Marks)
(c) Explain SEVEN factors to consider in Mobile Application Development. (7 Marks)

QUESTION FOUR

(a) Explain Mobile App Framework?   (2 Marks)
(b) Explain THREE categories of the Mobile Applications.   (3 Marks)
(c) State and explain in details FIVE Mobile Application Frameworks.   (10 Marks)
(d) Discuss the building Components of GUI.   (5 Marks)

QUESTION FIVE

(a) 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)

(b) Eliminate the errors in the following xml code   (3 marks)

```xml
<?xml version="1.0" encoding="utf-8"?>
    <resources
    <color name="opaque_red">#f00
    <string name="hello">Hello!</string>
    </        >
```

(c) Define a content URI? Write the correct format of a content URI   (2 marks)

(d) State any two characteristics of a fragment.   (4 marks)

(e) Write the android hello world program.   (3 marks)