(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS
YEAR FOUR SEMESTER TWO EXAMINATIONS

FOR THE DEGREE OF
BACHELOR OF SCIENCE COMPUTER SCIENCE

COURSE CODE : CSC 465E

COURSE TITLE : MOBILE APPLICATION PROGRAMMING

DATE: 01/10/2021 **TIME:** 02:00 A.M – 04:00 P.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS **ONE** AND **ANY OTHER TWO**.

QUESTION ONE (COMPULSORY) [30 MARKS]

a) Define the following terms as used in mobile application programming. [2Mks]

   i. Activity

   ii. Intents

b) The onset of mobile technology is getting popular day by day and it is placing itself in the center of the present and future. Discuss the role of mobile applications in this development.

[6Mks]

c) Mobile application development is a process which is more complicated than the traditional software development process. Discuss complexities that come with mobile application programming. [6Mks]

d) Android is a language composed of Java and xml. Discuss why its use in mobile application programming is getting popular. [4Mks]

e) Discuss two major software requirements for android development. [4Mks]

f) Quality mobile application is key to its success. Discuss how you will ensure that this is met during and after mobile application development. [6Mks]

g) Name any two android development tools. [2Mks]

QUESTION TWO [20 MARKS]

a) Describe two types of 'activity' in android development. [2Mks]

b) An activity must go through several stages. Describe the life cycle of an android activity with neat sketch. [8Mks]

c) Consider the following canvas (2D graphics).

```
public class Graphics extends activity{
    @Override
    public void onCreate(Bundle savedInstanceState){
        super.onCreate(savedInstanceState);
        setContentView(new Graphics View(this));
    }
    static public class GraphicsView extends View{
        public GraphicsView(Context context){
            super(context);
```

```
        }

        @override

        protected void onDraw(Canvas canvas){

        }

    }

}
```

i)   Explain the above code.   [4Mks]
ii) Modify it by adding circle and squares separately.   [4Mks]
iii) Add text in the shape of circle.   [2Mks]

QUESTION THREE [20 MARKS]

a) Using examples, explain the building blocks, intents and services.   [4Mks]

b) Discuss android system architecture.   [6Mks]

c) Explain the purpose of the following manifest.   [4Mks]

```
<manifest   xmlns:android="http://schemas.android.com/apk/res/android"
package="com.google.android.app.myapp" >
<uses-permission android:name="android.permission.RECEIVE_SMS"/>
</manifest>
```

d) Write an Android application, "Where am I" to return the location.   [6Mks]

QUESTION FOUR [20 MARKS]

a) Mobile application user interface is totally different from traditional application user interface. Explain the differences that exists.   [4Mks]

b) Menus are very important building blocks of mobile application user interface.

   i) Describe two kinds of interfaces supported by android.   [2Mks]

   ii) Explain how to add menu in an android application with example.   [6Mks]

c) Write an android application to display the following interface. [8Mks]

MBSAT

Masked?

( ) Yes ( ) No

Authentified?

( ) Yes ( ) No

Periodic Password Change?

( ) Yes ( ) No

Password

· · · ·

Password Strength : 25.0 %

Character Masking : 100 %

Authenicity : 100 %

QUESTION FIVE [20 MARKS]

a) Security of any application is critical. Explain security measures that can be employed in android application. [6Mks]

b) Describe how you will distribute your application after development. [4Mks]

c) The end goal of mobile application development is a product that will give economic and social gain. Discuss how you will monetize your application. [6Mks]

d) Discuss emerging issues in mobile application development. [4Mks]