

PAN AFRICA CHRISTIAN UNIVERSITY

**BACHELOR OF BUSINESS INFORMATION TECHNOLOGY AND BACHELOR
OF SCIENCE IN INFORMATION TECHNOLOGY**

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING AND INFORMATION TECHNOLOGY

COURSE CODE: BIT305/BSIT305

COURSE TITLE: MOBILE APPLICATION DEVELOPMENT

CAMPUS: ROYSAMBU

EXAM DATE: XXXX,XXXX APRIL,2024

TIME: XXXXXXXX

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer All questions in Section **A** and any other Three questions in Section **B**.
- Write only your **student number** on the answer booklet provided.

SECTION A

(Answer ALL questions in this section)

Question 1:

a) Explain how J2ME is modular.

[2

Marks]

b) Android operating systems for mobile devices has been increasing its market share worldwide. Describe one reason that explains this trend.

[2 Marks]

c) The code below is meant to display the value of a button text property on a textView when the user clicks on the button, the id of the textView is tv1. Write the missing statements.

[4 Marks]

```
public class MainActivity extends Activity{  
    protected void onCreate(Bundle savedInstanceState){  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        Button fButton=(Button) findViewById(R.id.button1)  
        final String bv1=fButton.getText().toString();  
        fButton.setOnClickListener(  
  
        );  
    }  
}
```

d) Outline the contents of the following directories in an android application.

i. src/

[1

Mark]

ii. res/

[1

Mark]

SECTION B

(Answer any THREE (3) questions in this section)

Question 2:

a) Explain the meaning of the following lines of code in the context of Mobile Application Development. **[7**

Marks]

```
Public class Lab2 extends Activity
{
Public void onCreate(Bundle savedInstanceState)
{
Super.onCreate(savedInstanceState);
TextView view = new TextView(this);
View.setText("Welcome to PAC University Mobi Site \n");
setContentView(view);
}
}
```

b) Android application platform consists of many components.

i. Identify one of these component used in code (a) above. **[1**

Mark]

ii. Describe the function of the identified component in b(i) above. **[2**

Marks]

Question 3:

a) Explain any two selection controls that are used to implement user interface of a mobile application. Write a sample code to demonstrate their implements. **[5**

Marks]

b) Write the code for an android **WebView** component that will display the university web site given the url: <https://www.pacuniversity.ac.ke> and identity: myView.

[5

Marks]

Question 4:

Suppose that income tax is determined as follows: if income is less than 10,000 then there is no tax. For income between 10,000 and 30,000 the tax is 0.15 times (income-10000). For income greater than 30,000, the tax is 3000 plus 0.3 times (income-30000). Write the following files to calculate the tax given the income: -

i. Main Activity.java [4

Marks]

ii. Main_Activity.xml [3

Marks]

iii. Manifest.xml [3

Marks]

Question 5:

a) Juma is new in Mobile Application Development class. As an expert in the same, advice Juma how to set the environment for mobile application development (assume android developments). [3

Marks]

b) The following code snippet was extracted from a string.xml file

```
<string name="add_activity">Add Students</string>
```

```
<string name="delete_activity">Delete Student</string>
```

Write a code for a layout that will display four buttons using the four values in the string.xml snippet shown above.

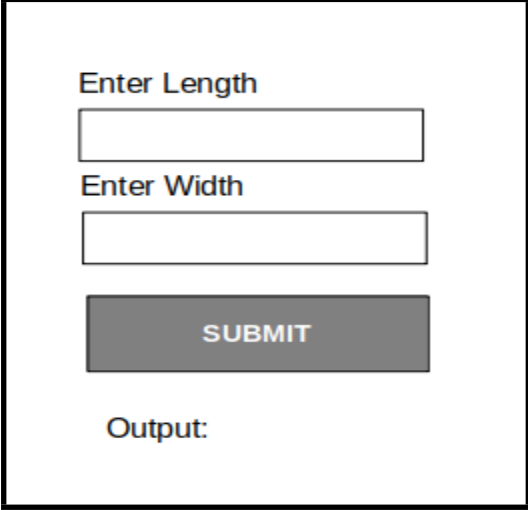
[7 Marks]

Question 6:

John who is an BIT student was given an assignment by his lecturer to develop a mobile application that can calculate the area of a rectangle when a user enters length and width in EditText fields and outputs the area of the rectangle through a TextView positioned below the submit button as shown in the figure below. Write

the code for the activity_main.xml file that will output the view in the figure below.

[10 Marks]



Enter Length

Enter Width

SUBMIT

Output:

EOF