



UNIVERSITY EXAMINATIONS: 2025/2026
EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
INFORMATION TECHNOLOGY
BIT/BBIT305
MOBILE APPLICATION DEVELOPMENT

DATE: 8.00-11.00AM, FRIDAY, DECEMBER, 2025
HOURS

TIME: 3

INSTRUCTIONS: Question One is Compulsory, Choose Three Other Questions

SECTION A (COMPULSORY)

QUESTION ONE (10 marks)

- a. Android applications include components that may be classified into four categories. Discuss any two of these categories.
(2 marks)
- b. Write the following files for a simple tax calculator given the income:
 - i. MainActivity.java (1 Marks)
 - ii. Main_Activity.xml (1 Marks)
- c. Android operating systems for mobile devices has been increasing its market share worldwide. Describe one reason that explains this trend. (2 Marks)
- d. Define and explain the relationship between default parameters and overloading. (2 Marks)
- e. Explain two limitations that are associated with mobile devices. (2 Marks)

SECTION B

(ANSWER ANY THREE (3) QUESTIONS IN THIS SECTION)

QUESTION TWO (10 marks)

- a. Discuss two methods used to describe the fragment life cycle in android application development. (4 marks)
- b. What is an exception handler? Use an example to explain your answer (2 Marks)
- c. Explain the purpose of " Setcontentview(R.layout.main)" in the following lines of code (4 Marks)

Public void onCreate (Bundle savedInstanceState)

```
{ .....  
    Setcontentview(R.layout.main);  
    ...}
```

QUESTION THREE (10 marks)

- a. With the help of a diagram, describe the four layers of the Android software architecture. (4 marks)
- b. Describe the following layouts in the context user interface of a mobile application. (2 Marks)
 - i) Relative Layout
 - ii) Frame layout
- c. Discuss two functions of a manifest XML file in mobile programming. (4 Marks)

QUESTION FOUR (10 marks)

- a. Discuss any two selection controls that are used to implement user interface of a mobile application. Write a sample code to demonstrate their implementation. (4 Marks)
- b. Using the SMS API write the code for MainActivity.java for composing a new SMS. (6 Marks)

QUESTION FIVE (10 marks)

- a. Describe the six steps of the mobile application development process.(6 marks)
- b. Explain the meaning of the following lines of code in the context of mobile programming. (4 Marks)

```
public class Lab2 extends Activity
```

```
    {  
        public void onCreate(Bundle savedInstanceState)  
        {  
            super.onCreate(savedInstanceState);  
            TextView view = new TextView(this);  
            view.setText("Fresher's Night is on Friday 11th December 2025  
\\n");  
            setContentView(view);  
        }  
    }
```

QUESTION SIX (10 marks)

- a) Explain five states that an activity goes through during a life cycle. (5 Marks)
- b) Write an android Layout File (activity_main.xml) that would display your name on the screen (5 Marks)