

**PAN AFRICA CHRISTIAN UNIVERSITY
EXAMINATIONS PAPER**



PAN AFRICA CHRISTIAN UNIVERSITY

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING AND INFORMATION TECHNOLOGY

COURSE CODE: BIT/BICT 305

COURSE TITLE: MOBILE APPLICATION DEVELOPMENT

EXAM DATE: DECEMBER, 2022

TIME: MONDAY 5PM-8PM

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.
- None programmable calculator permitted
- Calculators on phones, tablets and computers are NOT permitted in Theory Papers

SECTION A

(Answer ALL questions in this section)

QUESTION ONE

- a) Write an application using Kotlin or Java class that would convert a PAC portal into an application. Include layout properties and activities in application **(6 Marks)**
- b) Describe the mobile functionality and applicability of the following:

i) Firebase

(2 Marks)

ii) Gradle

(2 Marks)

SECTION B (Answer Any Three (3) Questions)

QUESTION TWO

a) Discuss any **TWO** limitations of the Kotlin and explain how they can be overcome.

(3

Marks)

b) Discuss any **TWO** positive and **TWO** negative impacts that the widespread use of mobile application has had on society. **(4 Marks)**

c) Write Java or Kotlin code to display the message "Mobile Application Development" using the Toast class. **(3 Marks)**

QUESTION THREE

a) Write an application using toggle button where the user can apply slider control and can press toggle with the switch object. Include layout properties and activities

(5 Marks)

b) You have been doing mobile application performance testing on a simulator. Give **TWO** reasons why you would need to do some testing on a real device. **(2 Marks)**

c) Explain and **THREE** types of storages as used in mobile application **(3 Marks)**

QUESTION FOUR

a) Your company has created an application for doing crossword puzzles. The target users are in the age class of over 65 years old. There has already been considerable

concentration on creating screens that are easy to navigate and intuitive. It is a primary goal that the software be easy to use. Viewability has been implemented with a revolutionary magnification ability based on moving a magnifying glass across the screen. The beta testers have still had problems using the application, particularly when trying to enter the letters into the squares.

Required: Given this information,

- i) Explain an area you should target for more complete testing **(2 Marks)**
- ii) Write both the XML and Java/Kotlin codes to create an Android App that would input the above details **(5 Marks)**
- iii) Highlight **THREE** factors to consider to when developing application **(3 Marks)**

QUESTION FIVE

- a) Discuss any **THREE** types of databases that enterprises/organizations can adopt to store large chunks of data accumulated over the organization. **(6 Marks)**
- b) Describe any **TWO** types of menu as used in application **(4 Marks)**

QUESTION SIX

- a) Discuss any **THREE** security issues in mobile application development **(3 Marks)**
- b) Highlight **THREE** development and debugging improvements required for an application **(3 Marks)**
- c) Explain any **TWO** widgets in mobile application development **(4 Marks)**