



FACULTY/COLLEGE	College of Business and Economics
SCHOOL	School of Consumer Intelligence and Information Systems
DEPARTMENT	Department of Applied Information Systems
CAMPUS(ES)	APB
MODULE NAME	DEVELOPMENT SOFTWARE 2B
MODULE CODE	DSW02B1
SEMESTER	Second
ASSESSMENT OPPORTUNITY, MONTH AND YEAR	Final Summative Assessment Opportunity November 2019

ASSESSMENT DATE	9 November 2019	SESSION	08:30 – 12:30
ASSESSOR(S)	Mr. Ronny Mabokela		
MODERATOR(S)	Dr Mpho Raborife		
DURATION	3 hours (180 min)	TOTAL MARKS	100

NUMBER OF PAGES OF QUESTION PAPER (Including cover page)	2
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INFORMATION/INSTRUCTIONS:

- This is a closed-book assessment.
- There are four (4) questions. **Answer ALL questions.**
- Read the questions carefully and answer only what is required.
- Number your answers clearly and correctly as per the question paper.
- Write neatly and legibly on both sides of the paper in the answer book, starting on the first page.

QUESTION 1**[25 MARKS]**

- 1.1 Name and explain in details about the android framework architecture. (10)
- 1.2 As a fragment is **no** longer being used, it goes through a reverse series of callbacks. Describe **ONLY** the five (5) fragments methods that goes through a reverse series when a fragment is no longer being used. (5)
- 1.3 Clearly differentiate between a **Service** and **IntentService**? How each is used? (4)
- 1.4 The MVC, MVP, and MVVM are three popular design patterns in software application development. Describe the difference between MVC, MVP, and MVVM. (6)

QUESTION 2**[25 MARKS]**

- 2.1 What is the use of **AndroidManifest.xml** file in android application and why do you need the file? (6)
- 2.2 What is **launch mode**? Explain the different launch modes in Android application. (6)
- 2.3 A layout is defined as a visual structure of the **user interface** such as the UI of the activity of widget. Describe any five (5) common layouts in mobile apps. (6)
- 2.4 What is an **Intent**? Describe the three (3) common use cases for using an **Intent**. (7)

QUESTION 3**[30 MARKS]**

- 3.1 Activities are the fundamental building block of android applications and they can exist in a number of different states. Draw a **neat diagram** for activity lifecycle method and explain each activity lifecycle method in an android application. (12)
- 3.2 Describe the eight (8) principles of **user experience designs** that are used in a mobile application development. (8)
- 3.3 Describe the four (4) essential states of an activity in an android application. (4)
- 3.4 What are important or essential items, which are present each time an android application is created? Explain each item. (6)

QUESTION 4**[20 MARKS]**

- 4.1 The principles of **user interface design** are intended to improve the quality of user interface design. Describe the five (5) graphic user interface characteristics. (5)
- 4.2 What is the purpose of an **IntentFilter** class? Describe two pieces of Information that can be specified in an **IntentFilter**. (4)
- 4.3 Web services use standardized industry standard protocol for the communication. This standardization of protocol stack gives the business many **advantages** such as a wide range of choices, reduction in the cost due to competition, and increase in the quality. Describe the **advantages** of the Web services. (5)
- 4.4 Describe how to design the mobile apps using the six (6) **user interface design** principles. (6)