MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

FACULTY OF ENGINEERING, APPLIED SCIENCES AND TECHNOLOGY

DEPARTMENT: COMPUTER SCIENCE AND INFORMATION SYSTEMS

MODULE: WEB TECHNOLGIES AND MOBILE APPLICATION DEVELOPMENT

CODE: BCOS211

SESSIONAL EXAMINATIONS
2024

DURATION: 3 HOURS

EXAMINER: MR. F. CHINYASA

INSTRUCTIONS

1. Answer ALL **questions** in Section A
2. Answer Any **three (3) questions** in Section B
3. Start a new question on a fresh page
4. Total marks 100

Additional material(s): None

SECTION A:

Question 1

a) Explain the following terms:
   i.   Web page;   [**2 marks**]
   ii.   Website;   [**2 marks**]
   iii. Full-stack web developer; and   [**2 marks**]
   iv.   Domain.   [**2 marks**]

b) With aid of a diagram, describe the URL structure.   **[12 marks]**

c) Write an HTML code that outputs a login form for a system user with the necessary
   validations.   **[20 marks]**

SECTION B:

Question 2

a. Describe any five Android UI controls.   **[10 marks]**
b. Discuss Android Intents and their variations/types.   **[10 Marks]**

Question 3

a.   Design a Flutter application that performs the following:
   i.Inserts a navigation bar with a title My_App;   **[5 marks]**
   ii.Removes the debug banner from the emulator;   **[5 marks]**
   iii.Displays bottom navigation bar with home and settings icons; and   **[5 marks]**
   iv.Inserts an image in the scaffold.   **[5 marks]**

Question 4

a. Compare stateless and stateful widgets.   **[8 marks]**
b. Describe the architecture of a typical Flutter application.   **[12 Marks]**

Question 5

a. Discuss the concept of Search Engine Optimization.   **[8 Marks]**
b. Design a web page of your choice showing the implementation of Search Engine
   Optimization.   **[12 Marks]**

END OF EXAMINATION