University of Ruhuna - Faculty of Technology
Bachelor of Biosystems Technology
Level 1 (Semester II) Examination - November/December 2023
Academic Year 2021/2022

Course Unit: BST1212 - Information Technology II (Theory)
Time Allowed: 1 hour and 30 minutes

This question paper contains **04 pages** including this instruction page

IMPORTANT INSTRUCTIONS:

1. The medium of this examination is **English**.

2. This is a **Closed Book** examination.

3. This Examination consists of **three (03)** questions that are given equal marks.

4. You must **answer all three (03) questions** in this examination.

1. This question is based on Database Management Systems (DBMS).

   i.   Briefly explain what is a DBMS and provide **two (2)** examples.

   ii.   Define the following terminologies with respect to DBMS.

          a) Table
          b) Relational Database
          c) Primary Key
          d) Foreign Key

   iii.   Name **two (02)** different views that are used in the Design Tools Tab of MS Access.

   iv.   What are the **theree (03)** different relationships in Relational Database Management System? Breifly describe one of them.

   v.   List down **four (04)** functionalities of a DBMS.

   vi.   List down **two (02)** main characteristics of the database approach.

   vii. List down **two (02)** categories of database users. Give **two (02)** examples for each category.

   viii. Briefly describe **four (04)** key steps of the database design process.

   ix.   SQL functions can be categorized into **two (02)** types. List down the categories.

   x.   Write SQL statement for the following questions. You can decide the data type and length suitable for the fields.

       a. Create a table called "Persons" that contains five columns: PersonId, LastName, FirstName, Address, and City.
       b. Insert **two (02)** data records to the "Persons" table created above.

2. This question is based on markup and programming languages.

   i.   Define what is Web Browser using a suitable example.

   ii.   What is the meaning of the <!DOCTYPE> declaration in HTML?

   iii.   List down **two (02)** major categories of web development tools.

   iv.   Write down a HTML code to get the following output in figure 01.
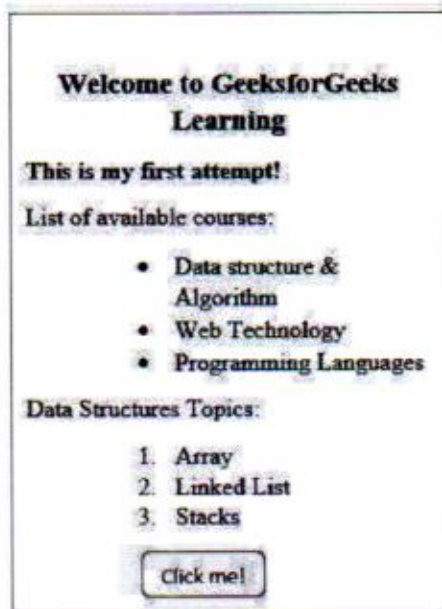
Figure 01

v. Name **five (05)** HTML attributes.

vi. Briefly describe what is a Programming Language.

vii. Write down **four (04)** major concerns when designing a good programming language.

viii. Briefly explain **two (02)** benefits of Object-Oriented Programming Languages.

3. This question is based on statistical packages.

i. SPSS has **three (03)** program windows. What are they?

ii. List down **three (03)** basic information that you should know when you are setting up variable names in SPSS.

iii. List down **three (03)** measurement levels in SPSS.

iv. Define the terms Categorical Variables and Numerical Variables.

v. Write down **two (02)** examples for the following data types.

- Ordinal Data
- Nominal Data.

vi. Write down **two (02)** strengths and **two (02)** weaknesses of SPSS.

vii.   List down **four (04)** main bars of the Overview of SPSS.

viii. What are the uses of statistics in real life? Briefly describe **three (03)** of them.

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