



UNIVERSITY EXAMINATIONS

**THIRD YEAR EXAMINATION FOR THE AWARD OF THE
DEGREE OF BACHELOR OF SCIENCE IN APPLIED COMPUTER
SCIENCE/COMPUTER SCIENCE
FIRST SEMESTER, 2023/2024
(AUGUST-DECEMBER, 2023)**

ACMP 312/COMP 314: EVENT DRIVEN PROGRAMMING

STREAM: Y3 S1

TIME: 2 HOURS

DAY: MONDAY, 9.00–11:00 AM

DATE: 27/11/2023

INSTRUCTIONS

1. Do not write anything on this question paper.

Answer Question ONE [Compulsory] and any other TWO Questions

QUESTION ONE [30 MARKS]

Question One

- a) Explain the difference between parameter passing by reference and parameter passing by value as applied in VB.Net programming. (4marks)
- b) Exceptions can occur while programming in VB.Net. Provide a syntax which can handles those exceptions. (4 marks)
- c) Explain any 4 types of VB.Net windows that you may be aware of. (4 marks)
- d) Discuss how you can setup a full stack environment inVB.Net programming language. (5 marks)
- e) Describe what makes a VB.Net programming language professional. (4 marks)
- f) Best practices in programming require documentation of an application. Explain two ways of implementing program documentation in VB.Net language hence state its goal. (5 marks)
- g) It is pertinent to incorporate program access specifiers in VB.Net. Discuss. (4 marks)

Question Two

- a) Write a program that calculates the volume of a cuboid given that $\text{volume} = \text{length} * \text{width} * \text{height}$ using a function and call it from the main program. Be sure to use comments for readability purposes. (12 marks)
- b) VB.Net encourages on the use of functions. Discuss. (8 marks)

Question Three

- a) Describe any five basic controls that you may need when designing a VB.Net graphical user interface. (5 marks)
- b) A database table has five fields (RegNo, FName, SName, Course and Gender). Design a GUI in VB.Net that will allow you to add, save, delete, moveprevious, movenext and close that application. (10 marks)
- c) Explain the difference between a Do loop and For...Next loop control structures as used in VB.Net programming language. (5 marks)

Question Four

- a) Connecting a MS SQL server database to VB.Net GUI becomes inevitable iwhen developing an application. Give a code in VB.Net that will establish a connection to the developed GUI.
- b) Write a program in VB.Net to connect MS. Excel dataset and display it using a data gridview control. (10 marks)

Question Five

- a) Briefly describe how you can create a secure VB.Net full stack application. (8 marks)
- b) Write a VB.Net program that will enable a user to search for a specific database record. Use comments where you deem appropriate. (8 marks)
- c) Explain the concept of full-stack software development. (6 marks)