UNIVERSITY EXAMINATIONS [SPECIAL PAPER]

ACADEMIC YEAR: 2021/2022   **UNIT NAME**: Business Computing with .NET Framework

SEMESTER: JAN-APRIL 2022   **UNIT CODE: BSCIT 3230.**

DATE: APRIL 2022   **TIME**: 2 HOURS

INSTRUCTIONS:

ANSWER YOUR QUESTIONS IN ANSWER BOOKLET PROVIDED

ANSWER QUESTION ONE [COMPULSORY] AND ANY OTHER TWO QUESTIONS
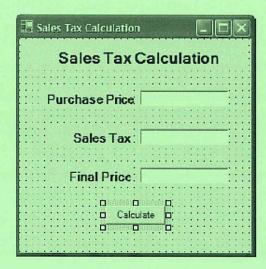
<u>**Question One**</u>   **(30Marks)**

a) Explain three types of control structures as used in event driven programming   (6MKS)

b) Write visual basic code snipped to do the following

   i.   Validate if textbox "txtname" is empty. If empty it should display the error message "Name cannot be blank" and takes the cursor back to the text box for correction.

     (4MKS)

   ii.   Disable a button named "btnpost" when the user clicks on it.   (1MK)

   iii.   Hide the form "frmone" and open another form "frmtwo" when a button in "frmone" is clicked   (1MK)

c) Describe three categories of applications that can be built in the .Net framework   (6MKS)

d) Write a visual basic program to calculate the sales tax when the calculate button is clicked. Using the GUI design shown   (6MKS)

e) Write a Visual basic application to do the following: When the user enters his/her name into the textbox **txtName** and clicks the button **btnClick** the name typed in by the user into textbox **txtName** is displayed on the label **lblName**.

f) Distinguish between the following terminologies as used in programming
   i. Variable and a constant (2MKS)
   ii. Explicit and implicit declarations (2MKS)

g) Distinguish between the logical operators "AND" and "OR" (2MKS)

Question Two (20Marks)

a) Describe the standard three-tier model, the components (6MKS)

b) Discuss three features of the Visual Basic .net IDE (6MKS)

c) Explain the following terminologies with an example in visual basic program statement
   i. Concatenation (2MKS)
   ii. Exponentiation (2MKS)

d) Write a program below will allow the user to enter the height, width and depth of a water tank, then calculate and output the volume when the button capacity is clicked. Use the interface provided below: (4MKS)

```
 🖳 Tank Ca...    —   ☐    ✕

      Water Tank Capacity

  Height (cm)   [txtHeight    ]
  Width (cm)    [txtWidth     ]
  Depth (cm)    [txtDepth     ]
          [   btnCapacity   ]
```

Question Three (20Marks)

a) XYZ ltd Casual Employees are paid on hourly basis with different rates. You have been hired to write a small system for the company. Use the GUI provided to answer the questions that follows:

   If Gross pay is greater than 100000, then it is subjected to a tax of the gross pay else the tax is 20%

   Gross_Pay=Hourly Rate Multiplied by Hours Worked

   NetPay= Gross_Pay Minus the Tax