

PIONEER INTERNATIONAL UNIVERSITY

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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:

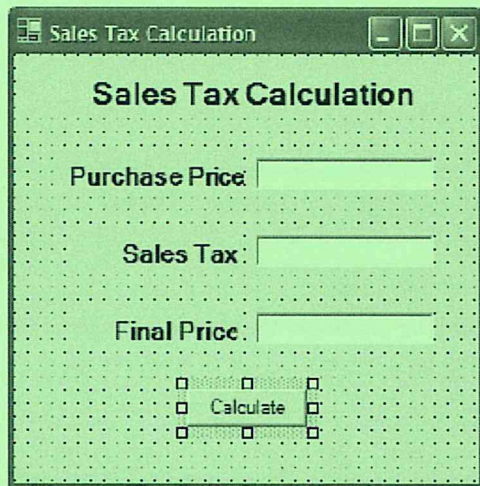
ANSWER YOUR QUESTIONS IN ANSWER BOOKLET PROVIDED

ANSWER QUESTION ONE [COMPULSORY] AND ANY OTHER TWO QUESTIONS

Question One

(30Marks)

- a) Explain three types of control structures as used in event driven programming (6MKS)
- b) Write visual basic code snippets 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)

Question Three

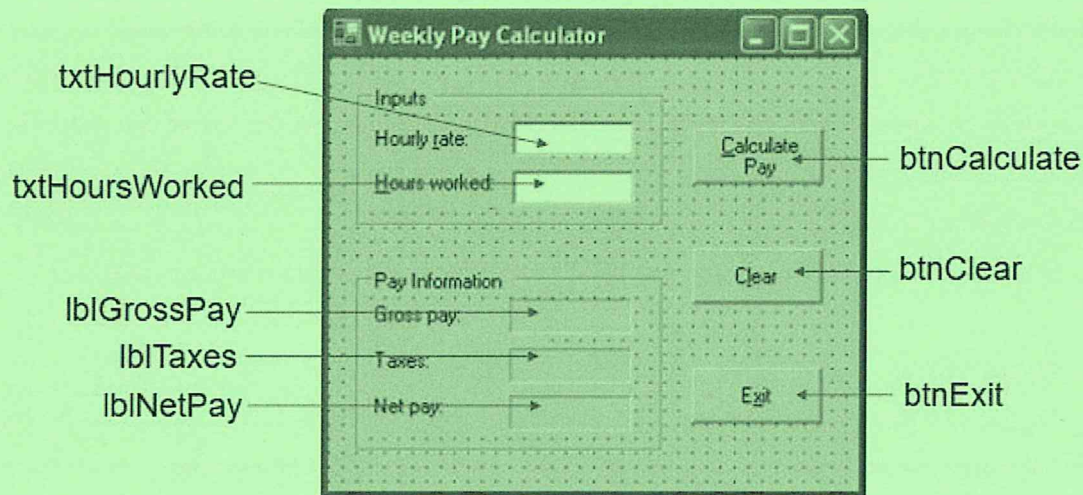
(20Marks)

- 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



Required:

- i. Write a program that will calculate the gross pay and the net pay when the hourly rate and hours worked are entered through the text boxes when the button calculate pay is clicked (10MKS)
 - ii. Write the VB code to clear the text boxes and the labels when the user clicks the button "Clear" (2MKS)
 - iii. Write the VB code to exit the form when the user clicks the exit button (1MK)
- b) Visual Basic .NET is an Object-oriented programming paradigm. Explain the following terminologies as used in Object-oriented programming (4MKS)
- i. Class
 - ii. Object
 - iii. Polymorphism
 - iv. Inheritance
- c) Highlight three characteristics of a quality program (3MKS)

Question Four

(20Marks)

- a) Explain the following terminologies as used in .NET programming languages
- i. Statement (1MK)
 - ii. Syntax (1MK)
 - iii. Semantics (1MK)
 - iv. Debugging (1MK)
 - v. Keyword (1MK)

- b) Write a program to display the number from 10 to 1 using the For loop in a label called "lblistdown" (3MKS)
- c) Using do while, write a program in Visual basic to calculate the totals of number between 1 to 10 in a label "lblshow" (5MKS)
- d) Outline four mouse events in .NET event driven programming (4MKS)
- e) State three languages that can be used in .NET Framework as a programming languages (3MKS)

Question Five

(20Marks)

- a) Discuss two types of Connection classes provided by the .Net Framework (4MKS)
- b) Distinguish between the following terminologies as used in the .NET framework
 - i. Declaration statements and Executable statements (4MKS)
 - ii. Interpreter and a compiler (2MKS)
- c) Write the .NET string statements to do the following
 - i. Display the length of the string entered in the text box "txtname" in a label (2MKS)
 - ii. Convert the string entered in the text box in c (i) into capital letters (2MKS)
- d) Write a visual basic code that will calculate the totals, average, difference and division of two numbers entered through the text boxes and display the results in labels (6MKS)