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INTERNATIONAL COLLEGE PENANG (507232-U)
LAUREATE INTERNATIONAL UNIVERSITIES

FINAL
Examination Paper

(COVER PAGE)

Session : AUGUST 2012

Programme : DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

Course : CSC1180 : INTRODUCTION TO COMPUTER SYSTEMS & PROGRAMMING

Date of Examination : 10 December 2012

Time : 11 a.m. – 1 p.m. Reading Time : Nil

Duration : 2 Hours

Special Instructions :

This paper consists of SIX (6) questions. Answer any FOUR (4) questions in the answer booklet provided. All questions carry equal marks.

Materials permitted :
Nil

Materials provided :

Examiner(s) : NOR RAHAYU BINTI NGATIRIN

Moderator : LIGHT LAU

This paper consists of 6 printed pages, including the cover page

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DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

CSC1180: INTRODUCTION TO COMPUTER SYSTEMS & PROGRAMMING
FINAL EXAMINATION: AUGUST 2012 SESSION

This paper consists of **SIX (6)** questions. Answer any **FOUR (4)** questions in the answer booklet provided. All questions carry equal marks.

Question 1

- (a) (i) What is a PC card? (2 marks)
(ii) Explain the **THREE (3)** types of PC cards. (9 marks)
- (b) Explain with an aid of diagram how processor with pipelining works. (5 marks)
- (c) Write a program that requests a number between 100 and 999 from the user. If the number is not within range, the program should ask the input again. The number is then broken down into its individual digit and added together. E.g.: If the number is 425 then get the sum of $4 + 2 + 5$. The sum is then added to the original number. The process is iterated until the number is more than 1000. Then the program will display the number of iteration to reach beyond 1000. (9 marks)

Question 2

- (a) Calculate the taxes that are to be paid by 5 workers; given that if the salary is less than or equals to RM1000 the rate is 4%, and 8% if the salary is greater than RM1000. Show how you would illustrate the matter above using pseudocode. (5 marks)
- (b) (i) Why is computer literacy important? (2 marks)
(ii) Explain **TWO (2)** benefits of being a computer literate person. (3 marks)

- (c) Write VB program that requires name and students marks as the input to produce the output in Figure Q2(c) according to the following specifications:
- Add button is used to empty the textbox of name and marks and set the focus on the textbox of name
 - Save button will store the record of the name and marks inside an array that consists of five elements
 - If the input is not complete, message box will display "Information not complete"
 - If the array is full the message "Sorry, the array has full" will be displayed
 - Display button will display all the records that have been key in so far

Figure Q2(c)

(15 marks)

Question 3

- (a) Trace the output of the following program.

```

Option Explicit
Private Sub cmdButton_Click()
    Dim a As Single, b As Single, c As String, d As String

    a = 37.79
    b = 213.76
    c = "inti penang"
    b = a + b
    Print a + b

    For a = 1 To Len(c) Step 3
        d = d & Mid(c, a, 1)
        Print d
    Next a
    a = a + b
    Print a
    Print b
End Sub

```

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(7 marks)

- (b) (i) List out the **FIVE (5)** phases in System Development Life Cycle (SDLC). (5 marks)
- (ii) Describe any **ONE (1)** activity for each phase in SDLC. (5 marks)
- (c) Gelugor Furniture has loss and needs to sell existing inventories. The company decided to offer 20% less for all furniture models. Price for each 1200 furniture model store in an array named as curFurnPrices(). Write a Sub procedure to count value with new array named curDiscFurnPrices() which hold new price after discount for each model. Include a call example to the procedure. (8 marks)

Question 4

- (a) (i) Write a program to create the sequential file FOOD.TXT containing the information in Table Q4(a).

Item	Price	Discount Rate
Burger	5.99	10%
2pcs chicken	6.99	20%
French fries	4.99	30%
Pepsi	2.99	35%

Table Q4(a)

- (6 marks)
- (ii) A customer buys one of each item. Write a VB program for the above table to calculate the payment after discount on sales made to the customer. (5 marks)
- (b) By using example, what is the use of the following functions:
- (i) Fix()
(ii) LCase()
(iii) InStr()
(iv) Round() (8 marks)
- (c) List and explain **THREE (3)** types of file system. (6 marks)

Question 5

- (a) Explain **FOUR (4)** steps of deployment of VB Project. (8 marks)

- (b) Differentiate machine languages and the assembly languages. Discuss at least **TWO (2)** characteristics. (4 marks)

- (c) Convert the following figure by writing a complete program using If Else statement.

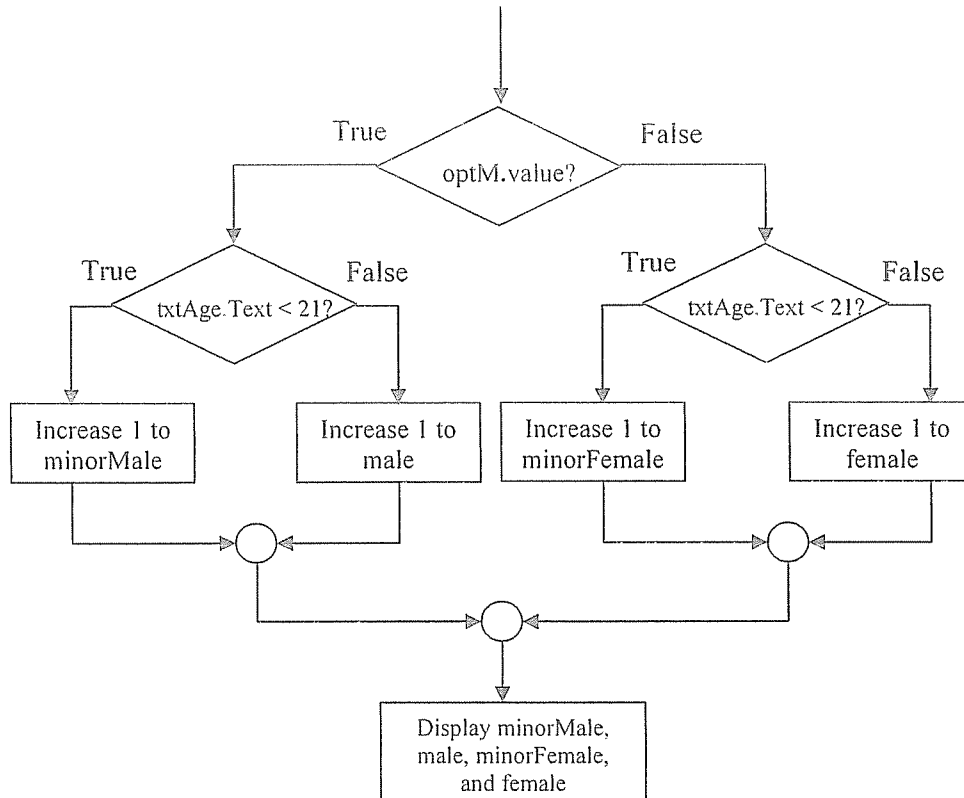


Figure Q5(c)

(7 marks)

- (d) Write a single program that allows a user to read **TWO (2)** user inputs. Display the results in a message box for the following instructions:
 - (i) Find the remainder by dividing the first input with the second input.
 - (ii) Find the result of when the first input is divided by the second input using integer division operator.

(6 marks)

Question 6

- (a) List and explain **THREE (3)** types of user interface. (6 marks)

- (b) Write a program to create user-defined data type. Then write a program to calculate in which century the college was founded. The needed formula is as follow:

$$\text{century} = 1 + \text{Int}(\text{year} / 100)$$

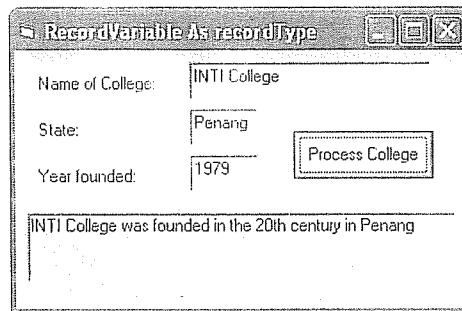


Figure Q6(b)

(10 marks)

- (c) By using For Next loop, draw a formation of stars in a picture box to produce the output in figure Q6(c) according to the following specifications:

- The looping is ranging from 0 to 3
- The formula for the scale is $(0, 2^i) - (2^i, 0)$
- Consists of five different lines colored green, black, red, blue, and yellow

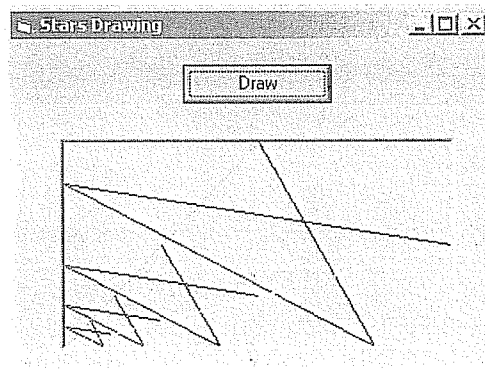


Figure Q6(c)

(6 marks)

- (d) State the difference between Dumb terminal and Intelligent terminal.

(3 marks)

--THE END--

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