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INTERNATIONAL COLLEGE PENANG (507232-U)
LAUREATE INTERNATIONAL UNIVERSITIES

FINAL
Examination Paper

(COVER PAGE)

Session : APRIL 2013

Programme : DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

Course : **CSC1180: INTRODUCTION TO COMPUTER SYSTEMS & PROGRAMMING**

Date of Examination : 3 August 2013

Time : 8a.m. – 10a.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 : **R.K. KRISHNAMOORTHY**

This paper consists of 5 printed pages, including the cover page

INTI INTERNATIONAL COLLEGE PENANG

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

CSC1180: INTRODUCTION TO COMPUTER SYSTEMS & PROGRAMMING
FINAL EXAMINATION: APRIL 2013 SESSION

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Question 1

- (a) Explain the **THREE (3)** types of PC cards. (9 marks)
- (b) List out **FOUR (4)** buttons and **FOUR (4)** icons with the respective values available in message box. (8 marks)
- (c) Write a program of one dimensional Integer array that with **FOUR (4)** numbers inputted by user. Swap the first digit with the fourth, and swap the second digit with the third. Your program should print the swapped numbers in a text box. (8 marks)

Question 2

- (a) Explain with an aid of diagram how processor with pipelining works. (5 marks)
- (b) List and explain **TWO (2)** types of file system. (5 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

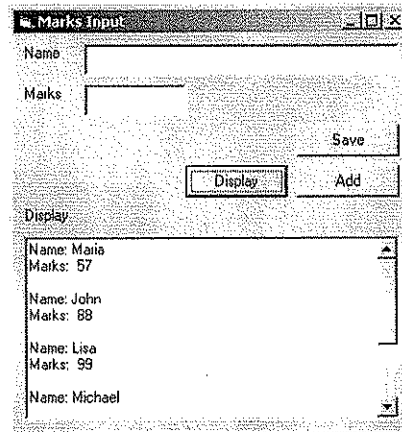


Figure Q2(c)

(15 marks)

Question 3

- (a) Write a function to indicate the number of currency notes necessary to reach a currency figure given by the user. The only notes allowed in this exercise are RM50, RM5, and RM1. The function will only accept whole number. E.g.: If the input is 1375, the string output will be "27xRM50, 5xRM5". Note that the figures are omitted if it is zero (0), e.g. there is no 0xRM1. Include a call example to the function and display the result in a message box. (9 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) List and explain any **THREE (3)** ways how on softwares are distributed. (6 marks)

Question 4

- (a) Given a sequential file "staff.txt" that contains unknown number of employee's profiles (Employee ID, Employee Name, Department, Position, and Salary). Write a program to calculate the average salary of all the employees. Then, display the complete profile of the employees where their salaries are above the average salary.

(10 marks)

- (b) Rewrite the following If Then statements by using Select Case blocks.

```
Private Sub cmdIf_Click()
    Dim CPrice As String
    Cls
    If optSeating(0).Value = True Then
        CPrice = 40
    ElseIf optSeating(1).Value = True Then
        CPrice = 27.5
    ElseIf optSeating(2).Value = True Then
        CPrice = 12.5
    ElseIf optSeating(3).Value = True Then
        CPrice = 6.7
    Else
        CPrice = "Invalid"
    End If
    Print CPrice
End Sub
```

(6 marks)

- (c) With the aid of a diagram, describe how devices that connected to the computer communicate with the processor to carry out a task.

(9 marks)

Question 5

- (a) By using repetition control structure in the Visual Basic, write a program to recreate the structure shown below in a **label**. Array is not allowed in this question.

0	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30

(10 marks)

- (b) Differentiate machine languages and the assembly languages. Discuss at least **THREE (3)** characteristics. (6 marks)
- (c) Write a program that draws two circles that touch at a single point. Then, draw a tick mark on the x-axis and y-axis for the joining point and label them, refer Figure Q5(c).

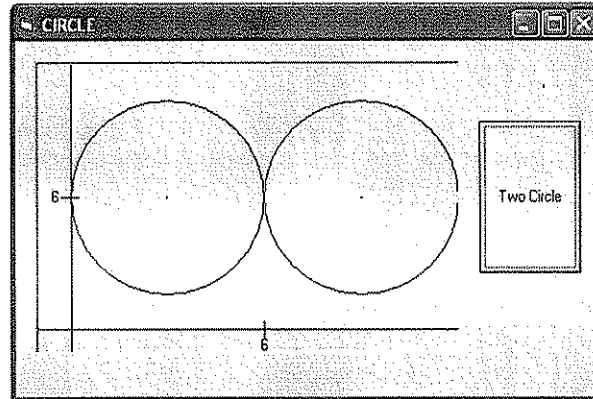


Figure Q5(c)

(9 marks)

Question 6

- (a) List and explain **THREE (3)** types of user interface. (6 marks)
- (b) Briefly explain the **FOUR (4)** factors to be considered when selecting a programming language or program development tool. (8 marks)
- (c) Given,

```
const campus = "Inti ♦ International ♦ College ♦ Penang ♦ (IICP)"
const school = "School ♦ of ♦ Engineering ♦ and ♦ Technology"
```

By using VB built-in functions, extract the following strings from the strings given above. (Please note that each ♦ represent a single spacing).

- (i) pisa (3 marks)
- (ii) Engineering ♦ college ♦ in ♦ Penang (4 marks)
- (iii) IICP ♦ is ♦ great (4 marks)

--THE END--