

 **INTI International  
University & Colleges**

**FINAL  
Examination Paper**

(COVER PAGE)

Session : APRIL 2017

Programme : Diploma in Information And Communication Technology (DICTN)

Course : ICT1103: Structured Programming

Date of Examination : 01 August, 2017 (Tuesday)

Time : 8:00am – 10:00am Reading Time : Nil

Duration : 2 Hours

**Special Instructions :**

Answer all **SIX (6)** questions in the answer booklet provided.

Materials permitted :

Non-programmable calculator

Materials provided :

Nil

Examiner(s) :

Shee Fui Chie, Vasuky Mohanan

Moderator :

Siti Hawa Binti Mohamed Said

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

DIPLOMA IN COMPUTER AND INFORMATION TECHNOLOGY PROGRAMME (DICTN)  
ICT1103: STRUCTURED PROGRAMMING  
FINAL EXAMINATION: APRIL 2017 SESSION

**SECTION A: (60 marks)**

**Instruction:** This section consists of **FOUR (4)** questions. Answer **ALL** questions in the answer booklet provided.

**Question 1**

(a) Identify the following variable name is valid or invalid. If invalid, explain why.

- (i) 5Numbers
- (ii) cost\$
- (iii) \_int16
- (iv) continue
- (v) birth day

(5 marks)

(b) Evaluate the final value of a, b, c, d and e for the following statements.

```
int b = 3, c = 10, d = -2, e, a ;
```

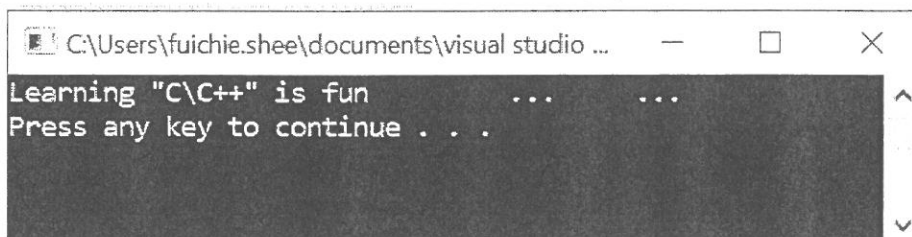
```
e = b++ * 3 + c-- ;
```

```
a = --d + ++b % 2 + c;
```

(10 marks)

**Question 2**

(a) Apply appropriate escape sequences and ONE cout (standard output) to display the string "Learning C\C++ is not fun....." as following output without removing any characters in the string:



```
C:\Users\fuichie.shее\documents\visual studio ...  
Learning "C\C++" is fun ... ..  
Press any key to continue . . .
```

(5 marks)

- (b) Remove all the unnecessary logic expressions / Boolean expressions from the following nested conditional statement:

```

float income;
cout << "Enter your monthly income: ";
cin >> income;
if (income < 0.0)
    cout << "You are going farther into debt every month." << endl;
else if (income >= 0.0 && income < 1200.00)
    cout << "You are living below the poverty line." << endl;
else if (income >= 1200.00 && income < 2500.00)
    cout << "You are living in moderate comfort." << endl;
else if (income >= 2500.00)
    cout << "You are well off." << endl;
    
```

(6 marks)

- (c) Convert the following if statement into switch statement:

```

if (selection == 'N')
    food_price = 20;
else if (selection == 'A')
    food_price = 50;
else
    cout << "Error\n";
    
```

(4 marks)

### Question 3

- (a) Rewrite the following *while* statement into *do-while* statement:

```

int n;
cout << "Enter a non-negative integer: ";
cin >> n;
while (n < 0) {
    cout << "The integer you entered is negative." << endl;
    cout << "Enter a non-negative integer: ";
    cin >> n;
}
    
```

(5 marks)

- (b) A function *productTwoNo()* accepts two floating parameters, calculate and return the multiplication of the two parameters.

- (i) Declare the function prototype. (4 marks)
- (ii) Write the function call statement. (3 marks)
- (iii) Define the function header. (3 marks)

**Question 4**

(a) Write single C++ statement of the following description for a double data type array *testMark*:

- (i) Declare the array *testMark* that contains 10 elements.
- (ii) Declare and initialize 0 to all elements of *testMark*.
- (iii) Declare and initialize 30, 67, 45, 88 to *testMark*.
- (iv) Assign 95.5 to the first element of *testMark*.
- (v) Assignment 90 to the last element of *testMark*.

(5 marks)

(b) Define a structure called *student* consisting the following members:

Student Name	Student I/D No.	Test Mark
John	J1763456789	77.50
Michelle	J1634986445	66.50
Potter	J1563088862	88.00
Mickie	J1735567874	97.00

(4 marks)

(c) The skeletal outline of a C++ program is shown below:

```
#include<fstream>
using namespace std;
void main() {
    char name[20];
    int a, b, c;

    ifstream infile("old.txt", ios::in);
    ofstream outfile("new.txt", ios::out);

    .....
    .....
    system("pause");
}
```

Write C++ program fragment for the following:

(i) Read the value of *name* from the formatted data file *old.txt* and display to screen.

(3 marks)

(ii) Enter values for *a*, *b* and *c* from the keyboard and write them to data file *new.txt*.

(3 marks)

**SECTION B: (40 marks)**

**Instruction:** This section consists of **TWO (2)** questions. Answer **ALL** questions in the answer booklet provided.

**Question 1**

An automobile rental company provides vehicle rental at RM26.59 a day plus 31 sen per kilometer. Write a program to calculate and display the car rental cost. The program reads the number of days the car rented and number of kilometers driven by the car. To celebrate Hari Raya Puasa, the company gives discount to customer according to the total car rental as following:

Car rental amount (RM)	Discount rate
1 - 200	5%
201 - 500	8%
More than 500	11%

(20 marks)

**Question 2**

Write a program that asks the user to enter two words. The program then prints out both words on one line. The words will be separated by enough dots so that the total line length is 30. For example,

*Enter first word:*

*turtle*

*Enter second word*

*153*

*turtle.....153*

(20 marks)

~ THE END ~

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