



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2013/2014**

COURSE NAME : COMPUTER PROGRAMMING
COURSE CODE : BNR 20803
PROGRAMME : BND
EXAMINATION DATE : JUNE 2014
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

THIS PAPER CONSISTS OF **FOUR (4)** PAGES

- Q1** (a) In computer programming, there are terms called *linker* and *compiler*. Discuss the differences between them. (6 marks)
- (b) C++ programming is an example of a high level programming. Draw a flowchart for translation process from high level language to machine language (8 marks)
- (c) Briefly explain the following computer programming terms.
- (i) *A program*
 - (ii) *Programming language*
 - (iii) *Programmer*
- (6 marks)
- Q2** (a) The following C++ program has some errors. Identify the errors and rewrite the program.

```

/*
Calculate and display the average of three input values
*/
include <iostream>;
using namespace std;

int main(
{
char a, /* first input value */
      b, /* second input value */
      c /* third input value */
      average; /* average of three inputs */

cout>>"Enter three integer numbers"
cin>>;
cin>b;
      cin>>c;
      average=(a+b+c)÷3;
cout<< "Average = " >>Average;
return 0.

```

(13 marks)

- (b) Draw a full flowchart for the program in **Q2(a)**.

(7 marks)

- Q3** (a) Construct C++ code that can generate grade based on the given requirements:

```

if student's grade is greater than or equal to 85
  Print "A"
else
  if student's grade is greater than or equal to 70
    Print "B"
  else
    if student's grade is greater than or equal to 60
      Print "C"
    else
      if student's grade is greater than or equal to 40
        Print "D"
      else
        Print "F"

```

(14 marks)

- (b) Explain briefly **THREE (3)** types of control structures.

(6 marks)

- Q4** (a) You are required by your supervisor to develop C++ based program that may calculate *power* and *voltage* based on the equation below:

$$\text{voltage} = \text{energy} / \text{charge}$$

$$\text{power} = \text{voltage} \times \text{current}$$

power – watts, *voltage* – volts, *current* – amperes, *charge* – coulombs, *energy* – joules

Draw a flowchart for the program based on the given descriptions.

(7 marks)

- (b) Develop a C++ program for **Q4(a)**.

(13 marks)

- Q5** (a) Develop a C++ program to choose the larger number between two integer numbers. Use functions format as parts of the program. The program output should be as below:

The larger number between 7 and 2 is 7

(13 marks)

- (b) Construct a sub C++ code that may give output as below: (Hint: Use C++ string)

Output:

z= secondaryschool

z= secondaryschool was fun

(4 marks)

- (c) Construct a sub C++ code that may give output as below: (Hint: Use C++ arrays)

Output:

Distance 1: 10

Distance 2: 24

Distance 3: 38

(3 marks)

END OF QUESTION