UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2016/2017

COURSE NAME	:	COMPUTER TECHNOLOGY
COURSE CODE	:	BNR 12103
PROGRAMME	:	BNE
EXAMINATION DATE	:	DECEMBER 2016 / JANUARY 2017
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

TERBUKA

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

Q1   (a)   State and discuss **THREE (3)** important elements for a computer.

(6 marks)

(b)   Briefly explain your understanding on the following:
(i)   Computer Network
(ii)   Operating System.

(7 marks)

(c)   State the differences between Intranet and Internet.

(7 marks)

Q2   (a)   Explain briefly Transmission Control Protocol (TCP) and User Data Protocol (UDP).

(6 marks)

(b)   Control unit function in CPU is to decode and execute instructions. Discuss process of executing intructions in CPU.

(5 marks)

(c)   Differentiate between Bus Topology, Star Topology and Ring Topology and sketch suitable diagram.

(9 marks)

Q3   (a)   Briefly explain the following computer programming terms.

(i)   A program
(ii)   Programming language
(iii)   Programmer
(iv)   Computer programming

(8 marks)

(b)   In computer programming, there are terms called *linker*, *compiler* and *assembler*. Briefly explain the differences between of them.

(6 marks)

(c)   C++ programming is an example of high level programming. Draw the flowchart for translation process from high level language to machine language.

(6 marks)

TERBUKA

CONFIDENTIAL

Q4   (a)   Sketch example of full adders for addition in computer arithmetic. 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 **Q4(a)**.

(7 marks)

Q5   (a)   Sketch diagram for instruction sets format and explain briefly each parts. 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)

- **END OF QUESTIONS -**