# UNIVERSITI TUN HUSSEIN ONN MALAYSIA

# FINAL EXAMINATION
## SEMESTER II
## SESSION 2011/2012

| | | |
|---|---|---|
| COURSE NAME | : | PROGRAMMING |
| COURSE CODE | : | DIT 2143 / DAM 31303 |
| PROGRAMME | : | 3 DDM / DDT / DAM |
| EXAMINATION DATE | : | MARCH 2012 |
| DURATION | : | 2 ½ HOURS |
| INSTRUCTIONS | : | ANSWER **ALL** QUESTIONS |

THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

**Q1**    Describe the declaration statement below in terms of its meaning;

(a)    `int Data_3;` and

(b)    `int Data[3][4];`

(4 marks)

**Q2**    Analyze the C program fragment below and answer the following questions based on it.

`char grades[5];`

(a)    State how many memory cells that are located for data storage.

(b)    State the type of data can be stored there.

(c)    Write a C programming code that is used to refer to;

(i) the first array element.
(ii) the last array element.
(iii) the second array element.

(d)    State the start/first index number for the array.

(6 marks)

**Q3**     Write a single line of C program for the following statement:

(a)     Declare the variables `c, thisVariable, q12345`, and `number` to be of type `int`.

(b)     Read an integer from the keyboard and store the value entered in integer variable `a`.

(c)     Print the message "This is a C program." in one line.

(d)     Print the message "This is a C program." with each word on a separate line.

(e)     Declare the variable `sumNumber` to be of type `float`.

(f)     Declare a function (function prototype) called `Tambah` that return an integer value and contains two parameters with the variable called `first` and `second` to be of type integer.

(g)     Declare a function (function prototype) called `Nama` that does not return any value and contains no parameter.

(h)     Call the function `Tambah` that you declare in question **Q3** (f).

(i)     Call the function `Nama` that you declare in question **Q3** (g).

(j)     The C statement `x++` can also be written as

(30 marks)

**Q4**     Evaluate the following expressions when $x = 8$, $y = 4$ and $z = 3$, with $x$, $y$, $z$ and the result to be of data type integer.

(a)     y / x

(b)     x / y

(c)     y % x

(d)     x % y

(e)     y % z

(f)     x++  +  y++

(g)     ++x  -  --z

(h)     --x  +  y++

(i)     x % 10

(j)     x/10

(20 marks)

**Q5**      Write a C program that produces screen output as of the following result using *one dimensional array* and *for... loop* statement.

```
        Months          Maximum Test
          1                 31
          2                 28
          3                 31
          4                 30
          5                 31
          6                 30
          7                 31
          8                 31
          9                 30
         10                 31
         11                 30
         12                 31
```

**(20 marks)**

**Q6**      Write a C program that produce output as of the following result using *for... loop* statement.

```
Increment Numbers...

          1
          2
          4
          8
         16
         32
         64
```

**(20 marks)**