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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : COMPUTER PROGRAMMING
COURSE CODE : DAE 20102
PROGRAMME : 2 DAE
EXAMINATION DATE : JUNE 2014
DURATION : 2 HOURS
INSTRUCTION : **PART A**
ANSWER ALL QUESTIONS.
PART B
ANSWER **ONE (1)** QUESTION
ONLY.

THIS QUESTION PAPER CONSISTS OF **EIGHT (8)** PAGES

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PART A

Instruction : Answer ALL Questions.

Q1 Define the following terms in algorithm representation.

(a) Flowchart

(2 marks)

(b) Pseudocode

(2 marks)

Q2 State the **THREE (3)** types of programming errors and gives a brief explanation for each of the type.

(6 marks)

Q3 Declare a suitable array for each of the following:

(a) An array called **Month** for 12 numbers of data type **int**.

(3 marks)

(b) An array called **Student_Name** for a sequence of 100 characters.

(3 marks)

(c) A multidimensional array called **Signal_Data** that has 5 rows and 4 columns to be of data type integer.

(3 marks)

Q4 State the appropriate data type for the value below:

- (a) **10603**
- (b) **Y**
- (c) **3.142**
- (d) **False**
- (e) **0.0005301**

(5 marks)

Q5 Draw and name the **FOUR (4)** basic symbols used in flowchart.

(6 marks)

Q6 Write the output generated by the C programming code below.

```
(a) #include <stdio.h>

int tambah(int satu, int dua);
int darab(int satu, int dua);
void nama();

int main()
{
    int first, second;
    int resultT;
    int resultD;

    printf("You were given two numbers\n");

    first = 10 + 2;
    second = 100 % 4;

    resultT = tambah(first,second);
    resultD = darab(first,second);

    printf("\n%d + %d is %d\n",second,first,resultT);
    printf("\n%d x %d is %d\n",second,first,resultD);

    nama();

    return 0;
}

int tambah(int satu,int dua)
{
    int sumNumber;
    sumNumber = satu + dua;
    return sumNumber;
}

int darab(int satu,int dua)
{
    int sumNumber;
    sumNumber = satu * dua;
    return sumNumber;
}

void nama()
{
    printf("\nFinal DAE 20102\n");
}
```

(10 marks)

```
(b) #include <stdio.h>

main()
{
    int n[10], i;

    for (i=0;i<=9;i++)
        n[i] = i+i;

    printf("%s%13s\n", "Element", "Value");

    for(i=0; i<=9; i++)
        printf("%7d%13d\n", i, n[i]);

    printf("\n");

    return 0;
}
```

(10 marks)

Q7 State whether the following variable is VALID or INVALID. Give reason for the INVALID variable.

- (a) `stdio.h`
- (b) `printf`
- (c) `character`
- (d) `2DAE`
- (e) `Zawir`
- (f) `long`
- (g) `return`
- (h) `$Ringgit_Malaysia`
- (i) `Touch-and-go`
- (j) `unsigned`

(10 marks)

Q8 Identify the value for each of the following expressions if $x = 1234$.

- (a) $x \% 10$
- (b) $x / 10$
- (c) $(x / 10) \% 10$
- (d) $x / 100$
- (e) $(x / 100) \% 10$

(10 marks)

Q9 Write a one (1) line C programming syntax (source code) for the below statements:

- (a) Read an integer from the keyboard and store the value entered in integer variable **answer**.
- (b) Declare the variable **TotalSalary** to data type **double**.
- (c) Declare the variable **thisVariable** to data type **int**.
- (d) Declare the variable **Status** to data type **boolean**.
- (e) Assign the value **True** to the variable **Status** which has the **boolean** data type.

(10 marks)

PART B**Instruction : Answer ONE (1) question only.****Q10** Write a full C programming code that will produce output as per below :

(a)	Months	No. of Days
	1	31
	2	28
	3	31
	4	30
	5	31
	6	30
	7	31
	8	31
	9	30
	10	31
	11	30
	12	31

(10 marks)

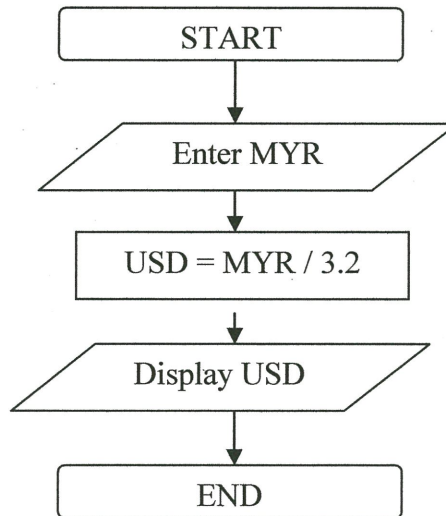
(b)	Times 3 Table
	1 x 3 = 3
	2 x 3 = 6
	3 x 3 = 9
	4 x 3 = 12
	5 x 3 = 15
	6 x 3 = 18
	7 x 3 = 21
	8 x 3 = 24
	9 x 3 = 27
	10 x 3 = 30
	11 x 3 = 33
	12 x 3 = 36

(7 marks)

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(3 marks)

- Q11 (a) Write full C programming code based on the flowchart below.



(5 marks)

- (b) Write full C programming code that will display the output below by using **for** loop statement.

2 4 6 8 10 12

(7 marks)

- (c) Write full C programming code that will display the output below by using **while** loop statement.

Counting down to... 5 4 3 2 1

(8 marks)

END OF QUESTIONS