UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2017/2018

COURSE NAME	:	COMPUTER PROGRAMMING
COURSE CODE	:	DAE 20103
PROGRAMME CODE	:	DAE
EXAMINATION DATE	:	JUNE / JULY 2018
DURATION	:	2 HOURS 30 MINUTES
INSTRUCTION	:	ANSWER **ALL** QUESTIONS IN THE GIVEN SPACE IN THIS QUESTION PAPER

TERBUKA

THIS QUESTION PAPER CONSISTS OF **TWELVE (12)** PAGES

NAME:_____   MATRIC:_____ PROGRAMME:_____

PART A : Circle the best answer.

<div align="right">(1 mark each)</div>

Q1. What is the correct value to return to the operating system upon the successful completion of a program?
- A.   -1
- B.   1
- C.   0
- D.   Programs do not return a value

Q2. What is the only function all C++ programs must contain?
- A.   start ()
- B.   system ()
- C.   main ()
- D.   program ()

Q3. Which of the following identifiers is NOT legal?
- A. $_amount
- B.   return
- C.   PurchaseMYR
- D.   welcome_to_c_programming

Q4. What punctuation ends most lines of C++ code?
- A.   . (full stop)
- B.   , (comma)
- C.   : (colon)
- D.   ; (semi colon)

Q5. Analyze the following code. Assuming all codes is written correctly, what is the output?

```
#include <iostream>
using namespace std;

void main ()
{
    int number=5;
    cout << 10 <<endl;
}
```

- A.   5
- B.   10
- C.   number
- D.   None above

Q6. Analyze the following code. Assuming all codes is written correctly, what is the output?

```
#include <iostream>
using namespace std;

void main ()
{
    int number=5;
    cout << "10" <<endl;
}
```

- A.   5
- B.   10
- C.   number
- D.   None above

NAME:_____   MATRIC:_____   PROGRAMME:_____

Q7. Analyze the following code. Assuming all codes is written correctly, what is the output?

```cpp
#include <iostream>
using namespace std;

void main ()
{
    int number=5;
    cout << 10-5 <<endl;
}
```

A. 5   C. number
B. 10   D. None above

Q8. Analyze the following code. Assuming all codes is written correctly, what is the output?

```cpp
#include <iostream>
using namespace std;

void main ()
{
    int number=5;
    cout << "10-5" <<endl;
}
```

A. 5   C. number
B. 10   D. None above

Q9. Analyze the following code. Assuming all codes is written correctly, what is the output?

```cpp
#include <iostream>
using namespace std;

#define number 10

void main ()
{
    cout << "10-5" <<endl;
}
```

A. 5   C. number
B. 10   D. None above

Q10. Analyze the following code. Assuming all codes is written correctly, what is the output?

```cpp
#include <iostream>
using namespace std;

#define number 10

void main ()
{
    cout << "number" <<endl;
}
```

TERBUKA

A. 5   C. number
B. 10   D. None above

NAME:_____   MATRIC:_____   PROGRAMME:_____

PART B

Q11. (a)   State **two (2)** type of variables

(2 marks)

```
```

(b)   Analyze the following program. Assuming it has no errors, determine the output for x, y and z

(3 marks)

Program	Output (Answer)
```#include<iostream>` `using namespace std;``  `#define x 10`` `void main ()`` `{`` ` int y=20;`` `        int z=x+y;`` ` cout<<"x="<<x<<endl;`` `        cout<<"y="<<y<<endl;`` ` cout<<"z="<<z<<endl;`` `}```	x=____ y=____ z=____ Press any key to continue . . .

Q12. (a)   State the size of following variables in byte

(2 marks)

Int   = ...

Char   = ...

Float   = ...

Double = ...

(b) Analyze the following program. Assuming it has no errors, determine the output of both 'x'.

(4 marks)

Program	Output (Answer)
```cpp#include<iostream>using namespace std;void main (){ int x=100; int y=50; int *point_x; cout<<"x="<<x<<endl; point_x=&x; *point_x=y; cout<<"x="<<x<<endl;}```	x=...........x=...........Press any key to continue . . .

Q13. (a) Analyze the following program and its output. Give reasons why message_2 is printed with extra characters.

(3 marks)

Program
```cpp#include<iostream>using namespace std;void main (){   char message_1 []={"hello"};   char message_2 []={'h','e','l','l','o'};   cout<<message_1<<endl;   cout<<message_2<<endl;}```
Output
message_1:hellomessage_2:hello╠╠╠╠╠╠╠╠╠╠helloPress any key to continue . . .

Answer:

TERBUKA

(b)   Propose **two (2)** ways the program can be modified to display message_2 correctly.

(6 marks)

Q14.   (a)   Explain the advantage of using 'Structure'

(2 marks)

(b)   Analyze the following program. Assuming there is no error, determine its output

(8 marks)

Program
| ```cpp
#include<iostream>
using namespace std;

struct info{
            int staff_num;
            int marks;
        };

void main ()
{
        struct info staff_1;
        struct info staff_2;

        staff_1.staff_num=1330;
        staff_1.marks=85;

        staff_2.staff_num=1335;
        staff_2.marks=75;


        cout<<"Staff num :"<<staff_1.staff_num<<endl;
        cout<<"Marks :"<<staff_1.marks<<endl;

        cout<<"Staff num :"<<staff_2.staff_num<<endl;
        cout<<"Marks :"<<staff_2.marks<<endl;
}
``` |

OUTPUT

6

TERBUKA

CONFIDENTIAL

PART C

Q15.   Analyze the following program.

```cpp
#include<iostream>
using namespace std;

void main ()
{

        int marks_1, marks_2;

        cout<<"Please input your marks for Test 1"<<endl;
        cin>>marks_1;
        cout<<"Please input your marks for Test 2"<<endl;
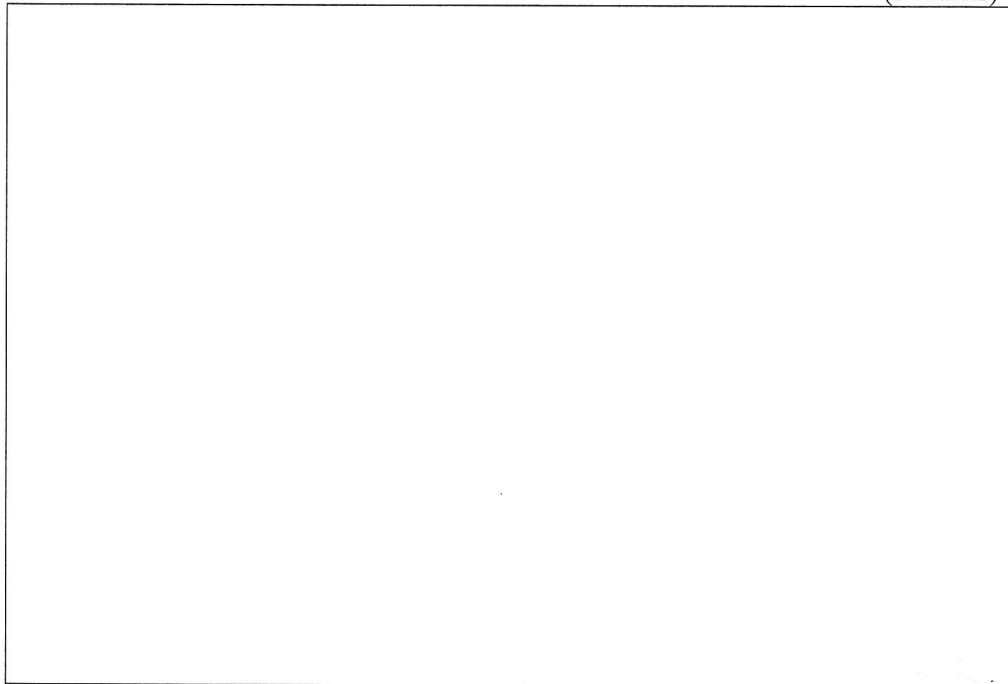        cin>>marks_2;

        if (marks_1>marks_2)
                cout<<"Your marks is getting lower, try harder"<<endl;

        else if (marks_1<marks_2)
                cout<<"Your marks is getting higher, good job"<<endl;

        else
                cout<<"Your marks is the same, don't give up"<<endl;
}
```

(a)   Draw the flowchart for it.

(5 marks)

TERBUKA

CONFIDENTIAL

(b)   Write a program to take an input from user (total marks) and determine whether he/she got an A (85 marks and above), F (below 40 marks) or pass (40 marks and above).

(10 marks)

Q16.   Analyze the following program.

```cpp
#include<iostream>
using namespace std;

void main ()
{
        for (int i=10;i>0;i--)
                cout<<i<<endl;
}
```

(a)   Determine its output

(5 marks)

8

(b)   Write a program using while loop to achieved similar output.

(5 marks)

(c)   Write a program using do-while loop to achieved similar output.

(5 marks)

Q17.   Figure below depicts the array named 'num' and its content (int).

9	8	7	6	5	4	3	2	1	0
Num[0]	Num[1]	Num[2]	Num[3]	Num[4]	Num[5]	Num[6]	Num[7]	Num[8]	Num[9]

(a)   Demonstrate two (2) methods to initialize this array.

Method 1

(3 marks)

TERBUKA

Method 2

(3 marks)

(b)   Complete the program below to total the content of array 'num' and display it.

(9 marks)

```cpp
#include<iostream>
using namespace std;

void main ()
{
        int num []={2,4,1,3,8,9,0,7,5,6};








































}
```

Q18.   Analyze the following program.

```cpp
#include<iostream>
using namespace std;

int total (int,int, int);

void main ()
{
        int num1, num2, num3, sum;

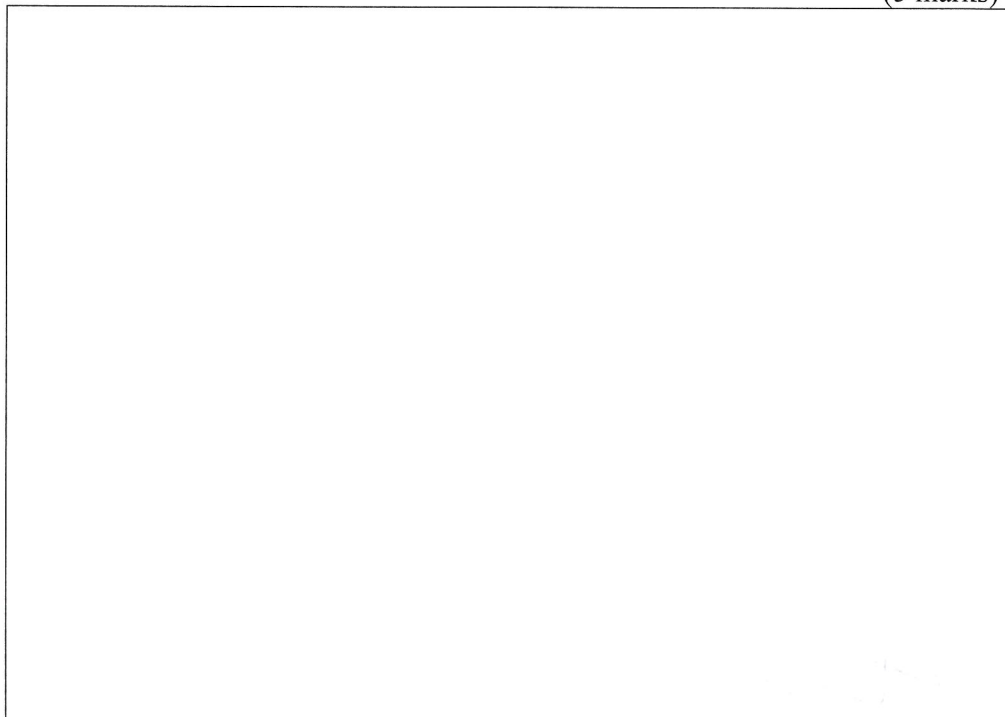        cout<<"Please input number (1)"<<endl;
        cin>>num1;
        cout<<"Please input number (2)"<<endl;
        cin>>num2;
        cout<<"Please input number (3)"<<endl;
        cin>>num3;

        sum=total(num1,num2,num3);
        cout<<"Total="<<sum<<endl;

}

int total (int a,int b, int c)
{
        int abc=a+b+c;
        return abc;
}
```

(a)   Draw the flowchart.

(5 marks)

(b)   Write a program base on the following specification:
- take three (3) integer inputs from user
- calculate the average using a function
- display the result

(10 marks)

-END OF QUESTION-