TATi
UNIVERSITY COLLEGE

UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET		
COURSE CODE	:	BCS 1253
COURSE	:	COMPUTER PROGRAMMING
SEMESTER/SESSION	:	SEM 1- 2022 / 2023
DURATION	:	3 HOURS

Instructions:

1. This booklet contains **5** questions. Answer **ALL** questions.
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, raise your hands and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 4 PRINTED PAGES INCLUDING COVER PAGE

QUESTION 1

a) What is C++? (2 marks)

b) List **TWO (2)** examples of header in C++. (2 marks)

c) Identify the functions of C++ below:

i) curly brackets { } _____ (2 marks)

ii) semicolon ; _____ (2 marks)

iii) return 0; _____ (2 marks)

d) Convert the shorthand Assignment Operators below:

i) X*=3; equivalent to _____ (2 marks)

ii) X/=2; equivalent to _____ (2 marks)

QUESTION 2

a) Explain **FIVE (5)** flowchart symbols. (10 marks)

b) Show **TWO (2)** examples of Prefix and Postfix in C++. (4 marks)

c) List **FIVE (5)** Increment Operators in C++. (5 marks)

d) List **FOUR (4)** Arithmetic Operators in C++. (4 marks)

e) Evaluate relational operator `true` or `false`.

i) -8 < 15 evaluates to _____ (1 mark)

ii) -6 != 6 evaluates to _____ (1 mark)

iii) -2.5 > 5.8 evaluates to _____ (1 mark)

iv) -5.9 <= 7 evaluates to _____ (1 mark)

v) 1 < 2 evaluates to _____ (1 mark)

vi) 1 == 2 evaluates to _____ (1 mark)

QUESTION 3

a) Rewrite the code blocks to a valid C++ program. (6 marks)

```
using namespace std;
#include <iostream>
cout <<"I LIKE C++";<<endl;
return 0;
int main {
}
```

Figure 1

b) Write a C++ statement using `for loop` to print numbers from 0 to 9. (4 marks)

c) Write a C++ statement using `for loop` to print "HELLO WORLD" 5 times. (4 marks)

QUESTION 4

a) Write a C++ statement to declares two variables of type `int` and prints their `sum` to the screen. (3 marks)

```
int x = 4;
_____ y = 7;
int sum = x ___ y;
cout <<"sum equal to" << ___<<endl;
```

Figure 2

b) Develop a simple C++ statement using `if statement` to print "KAMU BOLEH MEMANDU" if the variable 'age' equal 16, print "SAYA AKAN MENCUBA" if the age is equal to 18. (6 marks)

c) Produce a simple coding using `while loop` to get output below. (10 marks)

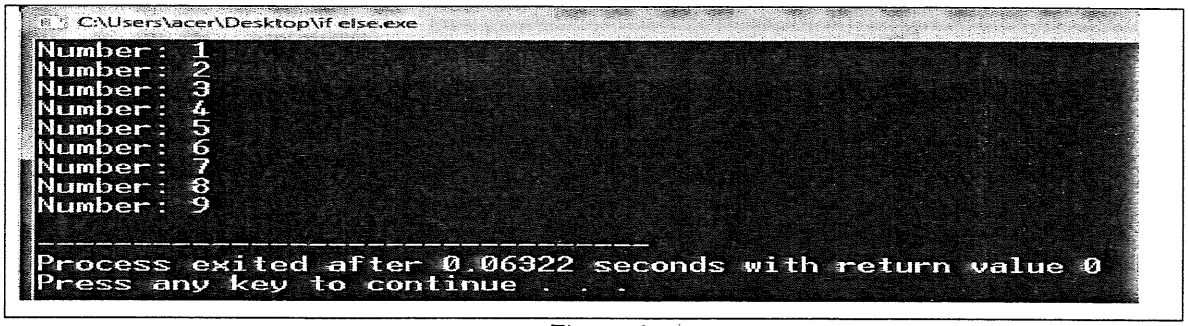

Figure 3

QUESTION 5

a) Write a program that prompts the user to enter two integers (the first one must be smaller than the second one). The program outputs how many numbers are multiples of 4 and how many numbers are multiples of 7 between the two integers (inclusive). If the first integer input is larger than the second input, it will display invalid input. The possible outputs are as follow:

```
Input integer 1: 35
Input integer 2: 12
Invalid input
--------------------------------
```

```
Input integer 1: 6
Input integer 2: 74
There are 17 numbers is multiple of 4
There are 10 numbers is multiple of 7

--------------------------------
```

i. Design the flowchart. (12 marks)

ii. Write a C++ program. (12 marks)

----------End of questions----------