MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR

EXAMINATIONS FOR SCHOOL OF BUSINESS

COURSE CODE: BCM 2103
COURSE TITLE: COMPUTER PROGRAMMING

DATE: 5TH DECEMBER 2018 TIME: 1100 – 1300HRS

INSTRUCTIONS

- Answer Question ONE and any other TWO Questions From Section II
- Question 1 is compulsory.
- Time 2HRS.

SWITCH OFF your mobile phone

SECTION I-COMPULSORY

A) Explain two methods of writing comments in C++. **[4 marks]**

B) Write a C++ program code segment to output the following statement the way it appears below. **[6 marks]**

"Programming in C++
is easy."

C) If a student scored grade value of 60, what will the following code display? Explain your answer.

```
if ( grade >= 60 )
  cout << "Passed";
```

[4 marks]

D) Can you say that the statements ++c; and c += 1; are the same? Explain your answer. **[3 marks]**

E) What will the following program segment do? Explain each line.

```
int counter = 1;
do
{
  cout << counter << " ";
} while (counter <= 10);
```

[5 marks]

F) When should you use a switch statement in a c++ program? Give an example problem which may require its use. **[4 marks]**

G) Briefly explain the statements (num != 65),(num==65) and (num=65). **[3 marks]**

H) A given program gets inputs of three numbers, calculates and outputs the average of the three numbers. Draw a flow chart to illustrate this. **[3 marks]**

SECTION II –CHOOSE ANY TWO QUESTIONS

Question Two (20 Marks)

A) Write a complete program that calculates and displays the sum of any three integers provided by a user. Add comments to the code where appropriate. **[20 marks]**

Question Three (20 Marks)

A) Write a complete program in C++ to add two numbers and display outputs. Your program **must** use three functions namely getvalues, computesum and displayresult. Use comments where necessary. Sample output should appear as shown below.

Please enter two numbers: 4
5
The sum of 4 and 5 is 9…

Question Four (15 Marks)

(A) The following program, with a few corrections, is meant to determine whether a string is a palindrome or not. Use it to answer the following questions.

(a) Which 'include directive' will you need to add to the header section for the program to run? **[4 marks]**

(b) What is a palindrome? Give an example. **[4 marks]**

(c) Identify at least three other errors which you will need to correct for the program to run correctly. Specify the line number for each of the errors you identify. **[12 marks]**

```
1. #include <iostream>;
2. using namespace std;

3. int main(){
       a. char string1[20];
       b. int i, length;
       c. int flag = 0;

       d. cout>>"Enter a string: "; cin << string1;

       e. length = strlen(string1);

       f. for(i=0;i < length ;i++){
       g. if(string1[i] != string1[length-i-1]){
              i. flag = 1;
             ii. break;
4. }
5. }

       a. if (flag) {
       b. cout << string1 << " is not a palindrome" << endl;
       c. }
       d. then {
       e. cout << string1 << " is a palindrome" << endl;
       f. }
       g. system("pause");
       h. return 0;
6. }
```