**Tutorial 3**

**(Class, Object, Constructors and Destructors in C++)**

**Instructions**

1. All tutorial sheets will be posted on the Google Classroom.

2. Students are advised to submit tutorial sheets solutions in classroom.

Q1. Write a program to read time in hour, minutes and seconds and add times defined by user. Create a class with private members hour, minutes and seconds, public members

void getTime(void);

void putTime(void);

Time addTime(Time T1,Time T2);

Create two constructors: default and parameterized.

Q2.

Which of the following is true about new when compared with malloc.

1) new is an operator

2) malloc is a function

3) new returns appropriate pointer, malloc returns void \* and pointer needs to typecast to appropriate type.

(A) 1 and 3

(B) 2 and 3

(C) 1 and 2

(D) All 1, 2 and 3

Q3. Write a C++ program to create array of students using dynamic memory allocation.

Q4. Write a C++ program to perform Insertion and deletion operation in array by creating array of marks of students in a class using dynamic memory allocation (new and delete operator). Calculate sum of marks of all the students and find the average.

Q5. What will be the output of the following code? Give a suitable explanation.

#include <iostream>

using namespace std;

class A

{

public:

A() {

cout << "Constructor" << endl;

}

~A() {

cout << "Destructor" << endl;

}

};

int main()

{

A\* a = new A[4];

delete [] a; // Delete array

return 0;

}