king Saud University
College of Computer and
Information Sciences
Computer science department

Answer sheet
(Dr Borhen)

Midterm 2 Spring 2017
Cs201-Programming in C++
20 Marks

Student Name:

Student ID:

## Question 1: Multiple Choice(10 Marks)

1. Which of the following in correct regarding constructor?
[A] class name and constructor name is same
[B] constructor does not return value
[C] constructor has return type
[D] Both A and B are correct.
[E] All are correct.

2. Which of the following is return type?
[A] void [B] int [C] double
[D] Both B and C are correct.
[E] A,B and C are correct.

3. Which of the following is a properly defined structure?
[A] struct {int a;}
[B] struct a_struct {int a;}
[C] struct a_struct int a;
[D] struct a_struct {int a;};

4. What is the output of the following code?
```
#include <iostream>
using namespace std;
int main()
{
int num[]={12,23,45,56,78};
  cout<<num[3]+num[4];
  return 0;
}
```
[A] 35 [B] 134 [C] 68 [D] 101

5. Which of the following correctly declares an array?
[A] int array[10];
[B] int array;
[C] array{10};
[D] array array[10];

6. What does your class can hold?
[A] data [B] functions [C] both a & b
[D] none of the mentioned

7. Which is used to define the member of a class externally?
[A] : [B] :: [C] # [D] none of the mentioned

8. Which of the following is a valid class declaration?
[A] class A { int x; };
[B] class B { }
[C] public class A { }
[D] object A { int x; };

9. What is the output of this program?
```
#include
using namespace std;
int main()
{
int a;
a = 5 + 3 * 5;
cout << a;
return 0;
}
```
[A] 35
[B] 20
[C] 25
[D] 30

10. What is the index number of the last element of an array with 9 elements?
a) 9
b) 8
c) 0
d) Programmer-defined

## Question :2 (10 Marks)

Question: 2(a) (2 Marks)

Create an integer array "Nums" of size 5.

```
int Nums[5];
```

Question: 2(b) (3 Marks)

Put the values 5, 1, 3, 7, 9 in the array "Nums".

```
int Nums[5] ={5, 1, 3, 7, 9 };
```

Question: 2(c) (5 Marks)

Find the sum of all the numbers in "Nums" using a for loop. The loop should print 25.

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**Question 3:** **(5 Marks)**

**Write the c++ program to input a four input using arrays and check if the value of each input is greater than 60. If it is greater than passed else failed?**

**Output :**

**45 60 100 55**

**The student in position 0 is failed**
**The student in position 1 is passed**
**The student in position 2 is Passed**
**The student in position 3 is failed**

**Question 4:** **(10 Marks)**

**Write a c++ program to create a class Student with student id, studentname, grade as attributes and create constructor, constructor with parameters and display method.**

**Question 5:** **(5 Marks)**

**Write two function one input and other output In c++ programming taking studentid and studentname**
**void input();**
**void output();**

**Output:**
**Enter the studentid: 123**
**Enter the studentname: Mohammed**
**The student id is : 123**
**The student name is Mohammed**

Q2 : (c)

```
#include<iostream>
using namespace std;
int main()
{  int Nums[5]={5,1,3,7,9};
   int i, sum=0;
   for (i=0; i<5; i++)
   Sum = Sum + Nums[i];
   Cout << sum;
   return 0;
}
```

Q3

```
# include < iostream>
using namespace std;
int main( )
{  int grade [4];
  for (int i=0; i<4; i++)
  {  Cout<<" Enter the grade of student in
                position" << i << ":";
    Cin >> grade[i];
  }
  Cout << endl;
  for (int i=0 ; i<4; i++)
  { if (grade [i] >= 60)
     Cout<<" The student in position"<<i<<
          " is passed. " <<endl;
    else
    Cout << " The student in position"
          <<i << " is failed. "<<
  }
  return 0;
}
```

Q4

```
#include <iostream>
using namespace std;
Class student
{
    private:  int id;
              char name[20];
              Char grade;
    public:
        int get_id( );
        Void get_name( );
        Void get_grade( );
        Void output( );
};
int student:: get_id( );
{ cout << "Enter the id of student:";
  cin  id;
  return id;
}
Void student:: get_name( )
{ cout<< "Enter the name of student";
  cin >> name ;
}
Void student:: get_grade( )
{ cout<"Enter the grade of student:";
  cin>> grade;
}
Void student:: output( )
{ cout << student details:"<<endl;
  cout << "Id number" << id << "; name of student :" << name<<, grade:"<< grade;
}
int main( )
{
    student stud;
    int a;
     a = stud. get_id( );
     stud. get_name( );
     Stud. get_ grade( );
     cout << endl;
      stud. output( );
return 0;
}
```

Q5

```
Void input( )
{   int id;
    char name[20];
cout << "Enter the student id"<<endl;
 cin >> id;
 cout << "Enter the student name";
 cin >> name;
 }
Void output( )
 {
cout<< "The student id is:" << id<<endl;
cout << "The student name is:" << name;
 }
```