Computer Sciences
University of Technology

Date: 3 / 6 / 2012
Time: 3 hours
Lecturer: Dr.Matheel Emad

Final Exam. 2011-2012
Term First

Subject: C++ prog.
Class: First
Branch: S.W. I.S. N.W.

NOTE: Answer only FIVE questions, each question have 10 marks

Q1:\ (a) Write the output of the following programs with trace:

1. # include <iostream.h>
void main()
{ int x,y,z; x=y=6; z*=x++;
x*=y+=z-=4; cout<<x<<y<<z;}
	2. # include <iostream.h>
	void main() {
	int a=2; a>>1; a<<1; cout<<a;
	a=a^2; a=!a; cout<<a; }

(b) Write a C++ program, to apply the mathematic operation using pointer.

Q2:\ (a) What is the difference between:

1. (char a; char a[10]; char *a; char *a[10];)
2. (setfill setw)

(b) Write a complete C++ program to find X to power Y using recursive function.

Q3:\(a) Draw a flowchart to find the G.C.D. between m and n.

(b) Write a C++ program with a function to sort ascending the numbers in the array a[n].

Q4:\(a) Find the errors and correct them:

1. int f; int a[3]={1,2,3}; f=&(*(a)+1; 2. char z[]=1234; cout<<slen(z);	3. int max[n]; 4. int union=5; 4. if(x=0) cout<<"it is zero";

(b) Develop a program in C++ to read the following information (using structure) st_name, st_code, st_age, st_birth(year, month, day), st_class(first, second, third, fourth) for 100 student and print the name of the student that has greater than 18 years old and still in the first class.

Q5:/(a) if x=36, y=69. Find (x<<3)+(x^y)+(x&y).

(b) Create the array bellow:

1	3	3	3	2
4	1	3	2	5
4	4	1	5	5
4	2	6	1	5
2	6	6	6	1

Q6:/(a) Define the conditional statement and give a suitable example for it.

(b) Write a C++ program to find the output of the following series:

$$sum = R - \frac{x^3}{5!} + \frac{x^5}{7!} + \frac{x^7}{9!} + \frac{x^n}{(n+2)!}$$

GOOD LUCK