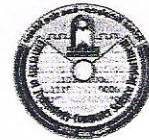




# Computer Sciences University of Technology



Date: 3 / 6 / 2012

Final Exam. 2011-2012

Subject: C++ prog.

Time: 3 hours

Term First

Class: First

Lecturer: Dr. Matheel Emad

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; }
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(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";
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(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