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University of Technology
Computer Science Department
Class: **first class /SW branch**
Time: **3 hours**
Date 1:6/6/2010

Subject: **Fundamental of Programming Techniques**

Examiner: **Msc. Ikhlas F. Nassir**

Final Exam / First Trail / 2009-2010

Q1 Define procedural programming technique, and then draw the types of it in a diagram. [15 marks]

Q2

a- write a forth generation program to find the minimum and maximum number from 20 numbers [9 marks]

b:-Translate the program into machine language [9 marks]

c:- draw the flowchart for the program [7 marks]

Q3 write a diagram for the program interpretation and execution then test the code segment bellow

```
Int x=2;
Cout<<"start \n";
If(x<=3)
 If (x! =3)
 Cout<<"hello from the second if \n";
   Else
  Cout<<"hello from the else \n";
Cout<<start again \n";
If(x>3)
 If(x! =0)
 Cout<<"hello from the second if\n";
Else
  Cout<<"hello from the else \n";
<<start again \n";
```

[15 marks]

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Q4 Answer only one question:-

a) Write a subprogram call-return structure and CEP,CIP for the following code segment

```
Float aver (int x1, int x2)
{
float z;
z=(x1+x2) / 2.0;
return(z);
}
void main()
{
Float x;
int num1,num2;
cout<<"Enter 2 positive numbers \n";
cin>>num1>>num2;
x=aver (num1, num2);
cout<<x;
}
```

[15 marks]

b) Draw the flowchart for the following pseudo code

```
Input N
Input keyword
I=0
Match=0
Do while I<=T
  I=I+1
If word=keyword then
    Match=Match+1
    Store in buffer
End
End
If N=0 then
Print "no Match"
Else
Call subroutine to print buffer information
End
```

[15 marks]

Good Luck