



Ministry of Higher Education and
Scientific Research
University of Technology
Computer Sciences Department
second trail of first course 2016-2017

Subject: C++ programming

Branch: (all branches)

Lecturers: Dr. Bashar S , lecturer Ali Adil Saeed

Date : 11 / 9 / 2017

class: first

Time : 3 hours

(Note: Answer Only Five)

Q1) Draw the flowchart required to find the sum of positive numbers among 50 numbers entered by user. (12 marks)

Q2) write program to display the following figure:

(12 marks)

```
xxxxxxx
yyyyyyy
xxxxxxx
yyyyyyy
xxxxxxx
yyyyyyy
```

Q3) Write program to find e from the following series : (12 marks)

$$e = 1 + x + (1/1!) + (2/2!) + (3/3!) + \dots + (1/n!)$$

Q4) Answer the following:-

A- Write C++ program to compute y from the following: (6 marks)

$$y = \begin{cases} x^2 + 5x - 20 / \sqrt{2}x & \text{if } x > 0 \\ 0 & \text{if } x = 0 \\ x^2 + (5 * x)^2 - 10 & \text{if } x < 0 \end{cases}$$

B- Write program to compute the value of Z according the following equation. (6 marks)

$$Z = \sqrt{\frac{x^2 y - 3 \sin(x)}{\tan x^3 + x^3 / y}}$$

Q5) Answer the following:-

A-What the output of the following program :

(6 marks)

```
#include<iostream.h>

void main()
{
    int z1,z2;
    float p1=0.5;
    z1=3; z2=9;
    ++z1; z2++;
    cout<<z1+z2<<endl;
    cout<<z2<<endl;

    for (int i=1 ;i<5;++i) {

        if (i%2==0) cout<< 13<<endl;
                else cout<<"p1"<<endl ;
    } }
```

B- WPrte program to read two integer numbers (p1,p2) and read the operation perform on these numbers.

(6 marks)

Q6) Answer the following :-

A- Draw the flowchart to find the largest value among four numbers.

(6marks)

B-Write C++ Program to find the sum and average of the 8 degrees of the student.

(6marks)

