Introduction to ComputING

Section G

Assignment 2 – ANALYTICAL PROBLEMS

DUE: tuesday 09, September, 2014.

**note:** You have to write the pseudo codes on paper. Typed pseudo codes will **not** be accepted.

**PROBLEM 1**

What is the output of the following pseudo-code if the user inputs 4 for Number1 and 3 for Number2.

What is the output if 3 is input for Number1 and 2 for Number2? What is the output if 10 is input for Number1 and 4 for Number2?

Show your working. In general what does the code do?

1. START
2. input Number1 from the user
3. input Number2 from the user
4. Answer = Number1
5. while (Number2 >0)

begin

* 1. Answer = Number1 \* Answer
  2. Number2 = Number2-1

end

1. output “Number1 is :”, output Number1
2. output “Number2 is:”, output Number2
3. output “Answer is”, output Answer
4. END

**PROBLEM 2**

Write the pseudo code for the following game: The user inputs 2 dice scores. If the sum of the scores is 6, the user wins and game ends. If the sum of scores is less than 6 then the user loses and game ends. If the sum of scores is more than 6 the game continues and the user inputs the scores again.

**PROBLEM 3**

Write the pseudo code to output 100 stars by using only one “output \*” statement.

**PROBLEM 4**

You are given the coordinates of two points A(ax,ay) and B(bx,by). Determine if a third point C(cx,cy) lies on the line formed by A and B. Review your concepts of calculus if necessary.

**PROBLEM 5**

You are given the coordinates of the three points of a right angle triangle. Write pseudo code to determine its area. Revise your concepts of geometry before solving this.