Name: _____   ID#: _____

Question 1:

a.   What is a short-circuit evaluation? Give a simple example for one?   (**2 points**)

b.   When a functional side-effect causes a problem for expression evaluation? Suggest one solution to avoid this problem   (**3 points**)

Question 2:

Assuming that there are no there are **no precedence rules and all operators associate right-to-left**, show the order of evaluation in the following expression: `a + b * c / d + (e – f)`   (**3 points**)

Question 3:

a. What is a control structure? Give an example for one. **(2 points)**

b. Why do we need to use the `break` statement in the C switch control Structure? **(2 points)**.

Question 4:

Rewrite the following pseudocode segment using a for loop structure in Java: **(3 points)**

```
K = (J + 13) / 27
Loop:
   If K > 10 then goto out
   K = K+1
   I = 3 * K - 1
   goto Loop
Out: ……….
```