**CSCE 4013/5013 Cloud Computing and Security**

**Quiz #10 (20 points)**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, ID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Problem #1 (10 pts)**

1. Yes / No Do you participate in this quiz?

**Problem #2 (10 pts)**

Assume that (1) the elements in an RDD will be evenly distributed among multiple partitions; (2) the local aggregation results of partitions will be returned to the driver program in the same order as the order of partitions in the original RDD.

1. val sourcerdd = sc.parallelize(List(-1, -2, 1, 2, 3, 4))

val result = sourcerdd.map(x => 1)

What is the content of result?

(1, 1, 1, 1, 1, 1)

1. val sourcerdd = sc.parallelize(List(-1, -2, 1, 2, 3, 4))

val result = sourcerdd.filter(x => x < 0)

What is the content of result?

(-1, -2)

1. val sourcerdd = sc.parallelize(List(-1, -2, 1, 2, 3, 4))

val result = sourcerdd.reduce((x,y) => if (x>y) x else y)

What is the content of result?

4

1. val sourcerdd = sc.parallelize(List(-1, -2, 1, 2, 3, 4),2)

val result = sourcerdd.reduce((x,y) => if (x>y) x else y)

What is the content of result?

4

1. The content of a pair RDD sourcerdd is {(1, 2), (1, 3), (2, 2), (3, 5), (3, 6)}

val result = sourcerdd.mapValues(x=>x+1).reduceByKey((x,y)=>x+y)

What is the content of result?

((1,7), (3,13), (2,3))