

Name: _____

PID: _____

This is the second quiz of CSE255/DSE230

On your desk you should have only the exam paper and writing tools. No hats or hoods allowed (unless religious items). There are 2 questions in this exam, totalling 100 points. Circle all correct answers.

You have 5 minutes to complete the exam.

Start by writing your name and PID on this page.

Good Luck!

I. (20 points) Lazy evaluation:

Mark **all** correct answers

1. Has lower memory requirements than Busy evaluation.
2. Requires fewer scans of memory than Busy evaluation.
3. Stores intermediate results.

II. (80 points) Consider the following code snippet:

```
1> X=sc.parallelize(range(3000000))
2> Y=X.map(lambda x: (x,cos(x)*sin(x))).cache()
3> Z=X.map(lambda x: (x,cos(x)*sin(x)))
4> print Y.reduce(lambda x,y:x+y)
5> print Y.reduce(lambda x,y:x+y)
6> print Z.reduce(lambda x,y:x+y)
7> print Z.reduce(lambda x,y:x+y)
```

Mark **all** correct answers

1. Line 1 will take significantly more time than line 2
2. Line 2 will take significantly more time than line 3
3. Line 6 will take significantly more time than line 4
4. Line 6 will take significantly more time than line 7
5. Line 7 will take significantly more time than line 4
6. Line 4 will take significantly more time than line 5