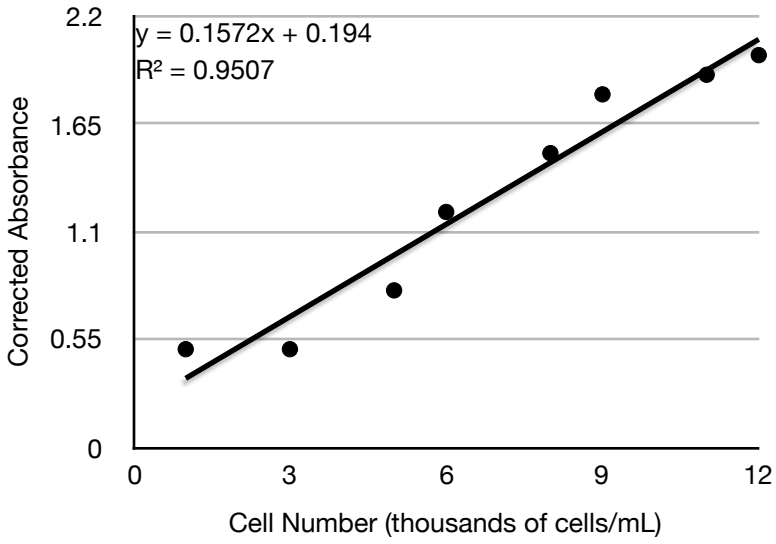
BE167L S19 Lab Practical Exam

Name: _____

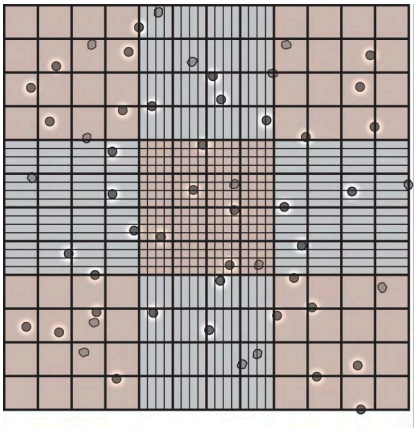
Written Portion (40 pts)

1) Your colleague is trying to trypsinize cells unsuccessfully, and you notice they failed to wash with PBS before adding Trypsin-EDTA. Why are they failing? (4 pts)

2) You are running an experiment to determine the effect of a new media on growth kinetics of your cells and decide to use an MTS assay to assess the number of cells. Using the standard curve give below, how many cells do you have in a 2 mL sample if corrected absorbance from the MTS assay was 0.80? (show all calculations). (6 pts)



3) Before re-plating your cultured cells, you use a hemacytometer to count the cells and estimate their concentration in your suspension. Given the following phase image (10x objective), count the cells and calculate the cell concentration. Assume that your cell sample is undiluted. Show ALL your work!!! (6 pts)



4) You wish to make 2 L of a 1 mM solution of a water-soluble reagent. Calculate how many grams of the reagent you will need to weigh out. Show your entire calculation, including all units. The molecular weight of reagent is 100 g/mol. (6 pts)

6) True or False (18 pts)

____ Pipette tips used to transfer cells in a suspension should be disposed of as glass waste.

___ The bicinchoninic acid assay (BCA) quantifies cell viability by measuring protein concentration.

___ When making PDMS stamps one should degas the base and curing agent before mixing them together.

___ You can leave your lunch inside the lab so long as it remains inside your closed backpack.

___ To obtain cell-alginate beads, you must pipette the cell-alginate solution into the calcium chloride solution (as opposed to pipetting calcium chloride into the alginate solution).

____ If you pipette a very viscous solution like PDMS, you need to aspirate more slowly than normal to obtain an accurate volume.

____ It is alright to write down observations on a paper you have around if you copy everything into your notebook afterwards.

____ Liquid containing 3T3 cells can be disposed of down the sink drain as soon as you mix it with 10% bleach.

____ Yellow media can indicate that you let your cells grow too dense.

Well 1—1x	Well 7—0.5x
Well 2—1x	Well 8—0.5x
Well 3—1x	Well 9—0.5x
Well 4—0.25x	Well 10—Blank
Well 5—0.25x	Well 11—Blank
Well 6—0.25x	Well 12—Blank