

SDSU MEMS Lab, Certification Examination

1. Describe the lithography process to create 10um high feature using SU8-10 on a Silicon Dioxide wafer. Please include as much detail as possible from the moment you enter the cleanroom to the moment you leave (Ex. What machine would you turn on first, etc.). Also be sure to include all steps to use each machine, i.e. “expose using the mask aligner” would not be sufficient.

2. Describe the differences between the three common substrates we use in the cleanroom. Additionally list a lithographic process or finished product in which each substrate would be most appropriate.

3. You are attempting to make features using SU8-10 that are 15um high. Describe the changes you would make to the lithography procedure and your reasoning behind them.

4. You are attempting a metal lift off process using PMGI+Shipley with Gold on a Si substrate, and notice that parts of your metal features are being washed away during the lift-off process. Provide a two reasons of why this may be happening, and what steps you would take to correct the problem.