CM12 Quiz

1. How to normalize all the lenses?

2. Is it possible to normalize lens currents without electron beam?

3. How to reset Objective lens current?

4. Which of the angles (degree) listed is the closest to stage tilt axis for S1 or S2?
   a. 0
   b. 45
   c. 90
   d. 145

5. Which number sounds right for Low-Dose S1 or S2 radius setting?
   a. 150 nm
   b. 1.5 um
   c. 1.5 mm

6. How to change specimen airlock default pumping time?

7. What is the pixelsize on specimen for an image taken at 60kX and on US1000 CCD with binning = 2?

8. What is the dose rate on specimen if an image with average raw counts of 3000 is taken in the condition of last question?

9. Which knobs are used to adjust Image Shift?

10. Which knobs are used to adjust Diffraction Shift?

11. Which size sounds correct for Obj. Aperture size?
    a. 40 nm
b. 140 nm
c. 40 um
d. 140 um
e. 400 um

12. Which Obj. aperture should be used for better contrast
   a. Smaller
   b. Larger
   c. No aperture

13. Which Obj. aperture should be used for higher resolution
   a. Smaller
   b. Larger
   c. No aperture

14. Objective aperture is located
   a. Above specimen
   b. Below specimen
   c. On specimen level

15. What does “right side of the beam” means? How can we know which size the beam is in?

16. What is the threshold IPG value (in log) above which we shouldn’t turn on filament current?

17. How can we “home” the stage position without beam?

18. What is happening when IPG shows 11 but the vacuum status say “starting up”?

19. Larger spotsize gives
a. Stronger beam intensity
b. Weaker beam intensity
c. Better beam coherence
d. Poor beam coherence

20. How can we know if the beam is properly blanked when large screen is UP?

21. On our CM12, the beam blank is controlled by
   a. Projection lens
   b. Objective lens
   c. Gun tilt coils
   d. Gun shift coils