III. Using the microscope to inspect Cu grid. (20pts)
   1. diagram 2pts.
   2. 3 images using different objective lens setup 6pts.
   3. line scans of the 3 images 6pts
      discussion 2pts
   4. image with aperture 2pts
      discussion 2pts

IV. Diffraction of sample A and B (25pts)
   1. diagram 3pts
   2. for sample A
      diffraction pattern 2pts
      vectors 2pts
      lattice constants 5pts
      lattice type 2pts
   3. for sample B
      diffraction pattern 2pts
      vectors 2pts
      rotation 5pts
      lattice type 2pts

V. Create dark-field images of slide A and slide B. (25pts)
   1. diagrams 5pts
   2.i. dark field image A 2pts
        dark field image B 2pts
        location of aperture 2pts
   2.ii. dark field image A 2pts
        dark field image B 2pts
        location of aperture A 2pts
        location of aperture B 2pts
   3. image edge contrast 2pts
      location of aperture 2pts
      discussion of mech. 2pts

VI. Use the constructed microscope to characterize the colloidal sample.
    (20pts)
    Diagrams 5pts
    Images 10pts
    Discussion 5pts

One page draft 10pts

Total: 100pts