CHECKLIST OF REQUIREMENTS FOR USING THE SEM UNSUPERVISED

User: __________________________ Date: ________ Examiner: _______________

Users must score 100% to use the Phillips 505 Unsupervised.

Users can be checked out any number of times until her/his score is 100%.

Scope must be used at least once a semester to maintain unsupervised status.

PRESTART CONDITIONS:

Power ON
Vacuum ON and Ready (V1 & V3 illuminated)
KeV set and OFF
Filament at 0
Compensation at X
Spot size at 500
CAL fully CCW
Mag at
Zoom OFF
Left & Right Image at Video 1
Display OUT
Rotation OFF
DET 1 selected
Scan mode on Line (--)
Right display CRT on Y-mode
Gain at 90
Black Level adjusted on screen

SPECIMEN INSERTION AND REMOVAL

Tilt Unlocked
Tilt at 15°
Low WD
High WD
Specimen position Focus set
Room lights out
Chamber vented
Gloves used
specimen Z-height set
Specimen stub set screw tightened
Chamber door closed securely
Chamber pumped out
**FILAMENT SATURATION**

- Filament correctly saturated
- Scan mode set to square (□)
- Gun Tilt centered
- Gun Shift centered
- Compensator on 2

**OPERATION**

- Focus
- Magnification
- Final lens stigmatism corrected
- Photographic contrast and brightness set
- Photographic information controls set

**BACKSCATTER ELECTRON IMAGING**

**CATHODOLUMINESCENCE IMAGING**
1. Does user know all steps, in order for turning microscope ON? □ □
2. Does user know all steps, in order for turning microscope OFF? □ □
3. Does user know correct use of Haskeris water cooling system? □ □
4. Can user locate, center and saturate filament correctly? (Not Under- or Over-saturated) □ □
5. Can user recognize condenser aperture alignment, locate and center aperture? □ □
6. Can user recognize objective aperture alignment, locate and center aperture? □ □
7. Can user correctly insert and remove specimens?
   - X/Y translates at 500/500
   - Specimen cartridge inserted & under vacuum □ □
8. Can user change film in the prescribed sequence (correct loading of film cassette)? □ □
9. Does the user pump down film desiccator properly? □ □
10. Does user know the emergency procedures? □ □
11. 10 hours of beam time is required.

Date       Beam Time
_________   __________
_________   __________
_________   __________
_________   __________
_________   __________
_________   __________

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