

GLY 4200C

14 points

10 students took exam

Numbers to the left of the questions (in red) are the points missed.

Name _____

December 5, 2012

10:30 a.m.

LAB FINAL EXAMINATION KEY

Closed Notes

True-False - Print the letter T or F in the blank to indicate if each of the following statements is true or false. Illegible answers are wrong. (1 point each)

- 6 F 1. 2° red is higher than $^\circ$ blue.
- 1 F 2. Albite twinning is always perpendicular to Carlsbad twinning, if both are present.
- 1 T 3. Along an "optic axis" in an anisotropic substance light will behave isotropically and a grain will remain in extinction between crossed nicols.
- 2 F 4. Carlsbad twinning is a type of polysynthetic contact twinning.
- 0 F 5. When the edge of the grain is slanted, the grain will have a faint outline and will appear to have a much lower RI than it actually does.
- 3 T 6. Interference colors are a side effect of light slowing down as it passes through different substances.
- 1 T 7. Reverse zoning connotes the transition, generally abrupt, to a higher temperature outer zone in a crystal.
- 3 F 8. Albite twinning is seen only in monoclinic feldspars.

Fill-Ins - Write in the word or words which best completes each statement or answers each question. (1 point per blank)

- 2 9. The ability of a mineral to show different colors when viewed along differing crystallographic orientations is called PLEOCHROISM.
- 10-12 Describe the proper conditions for observing twinning, for each category shown.
- 1 10) (CN or PP) CN
- 1.5 11. (Magnification) Low or medium power
- 2 12. (Iris) WIDE OPEN
- 1 13. A technique for estimating relief in which the edge of a compensator is inserted so that it casts a shadow on the grain. The side on which the shadow appears on the grain relative to the direction from which the shadow enters the stage is observed. This technique is known as the OBLIQUE ILLUMINATION method.
- 3 14. A mineral shows a white interference color. In order to determine if the white is first order white or high order white, the polarizer is rotated 90° to achieve a PN arrangement. If the color remains unchanged the color is HIGH ORDER WHITE.

When finished, check your answers (did you answer every question?), then exchange this sheet for the open notes portion of the exam.