GLY 4310 Name _____

12 points - 10 took exam May 3, 2010

Number in red to the left of the question is the number of incorrect responses.

Scores to the left of the answer in red are the number of incorrect responses. Instructor comments and answers are in blue.

LAB FINAL - Closed Book KEY

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)

3 T 1. Generally minerals with more open crystal structures are favored at higher temperatures

1 T 2. Slates and phyllites characteristically form from pelitic rocks. There is little difference in mineralogy from the original rock

2 F 3. Slates characteristically show a surface sheen, and often display crenulations.

2 T 4. Granulite facies rocks have mineralogy, and sometimes appearance, very similar to granite

5 F 5. White marble usually has calcitic limestone as a protolith.

5 F 6. When used for load-bearing structures, marble with all cavities filled with epoxy colored to match the marble is the preferred substance.

9 F 7. Talc is a common metamorphic product of impure calcitic limestones.

Multiple-Choice - Choose the best response to each statement or question. Print the letter corresponding to your choice in the blank. (1 point each)

0 D 1. Which of the following effects does stress produce?
A. Reduction in grain size increases the surface area available for chemical reaction
B. Complex minor folding
C. May be a source of localized heat - friction of rocks moving past each other may heat up the rocks along the contact
D. All of the above

2 D 2. A protolith described as a clastic sediment or sedimentary rock composed of sand-sized particles would be called:
A. Carbonate
B. Mafic igneous rock
C. Pelite
D. Pssamite

1 C 3. Which of the following minerals is characteristic of eclogite?
A. Augite
B. Diopside
C. Omphacite
D. Tremolite

5 D 4. The albite-epidote facies is approximately equivalent to which regional metamorphic facies?
A. Amphibolite
B. Blueschist
C. Granulite
D. Greenschist

8 C 5. Which of the following minerals is characteristic of the sanidinite facies?
A. Lawsonite
B. Riebeckite
C. Tridymite
D. All of the above

GLY 4310 Name _____
28 points May 3, 2010

LAB FINAL - Open Book Key

1-6 Identify each of the following rocks. Name the rock as specifically as possible. Indicate if the rock is foliated. (2 points each)

	Rock #	Rock Name	Foliation
1	1	Biotite Gneiss	Yes
5	2	Phyllite	Yes
0.5	3	Cordierite Hornfels	No
5.5	4	Actinolite Schist	Yes
7	5	Serpentinite	No
10	6	Andalusite Slate	Yes

7-10 Identify the indicated porphyroblasts, including variety if any, in each rock. (1 point each)

1	7.	Calcite
1	8.	Kyanite
1	9.	Diopside
6	10	Cummingtonite

11. Identify each of the following minerals in thin section. 1 point each.

	Letter	Mineral Name
5	A	Quartz
4	B	Glaucophane
8.5	C	Antigorite
6	D	Plagioclase
8	E	Epidote
0	F	Garnet

12-13. Identify the major minerals in the rocks by examining the hand specimen and the thin section, and name the rock. (2 points minerals, 1 point rock name)

		Minerals	
4	12 G	Muscovite	Plagioclase
		Biotite	Quartz
		Chlorite	K-spar
2	Rock Name:	Mica Schist	
2	13 H	Quartz	
		Pyrite	
		Glaucophane	
1	Rock Name:	Glaucophane schist	

GRADES

Closed Book _____

Open Book _____

Lab Final _____ %_____ Grade_____

Total Lab (out of 360) _____ %_____ Grade_____

Course grade _____% Grade_____

HAVE A GREAT SUMMER AND ENJOY SFC

Lab Final Exam

38.5	A	
37.0		
36.5 - 3		
36.0	A-	
34.0	B	
32.5	B-	
31.0	C+	**MEAN =31.4 (78.5%)**
29.5	C	**MEDIAN = 29.8**
29.0 - 3		
28.5	C-	
27.5	D+	
26.5	D	
24.5	D-	
23.5	F	

Overall Lab Results

341.0		
340.5		
337.3	A	
333.8		
332.0		
328.5		
327.5		
326.8		
325.3		**MEDIAN = 325.1**
325.0 - 2	A-	**MEAN =325.0 (90.3%)**
322.5		
320.0		
319.3		
317.0		
316.5		
314.8	B+	
297.9	B-	