



6. **8 pts** Shown is a mineral with the strongest type of bonds? What are the four types of mineral bonds we discussed in class (not hydrogen bonds)? Give an example of a mineral containing each.
7. **6 pts** What is the process shown? How does it relate to hydrogen bonds? What are two other properties of water that result from hydrogen bonds?
8. **4 pts** List from youngest to oldest the layers in the figure shown.
9. **4 pts** What are radioactive isotopes? How are they used?
10. **8 pts** The green atoms shown are of magnesium (Mg) and iron (Fe) In pink and brown are the silica tetrahedra. How does the bonding of tetrahedra result in mafic and felsic rocks? What are the differences in three properties that result? You may construct a chart if desired.

11. **4 pts** How does geology relate to the making of underwear in North Carolina? Explain. Explain the phrase, *Resistant rocks stand high in relief*.
12. **9 pts** Sketch and label the rock cycle, including the processes for forming the rocks.
13. **4 pts** Where is the closest place you could go to see billion-year-old rocks (besides a museum.) Why are they at the surface?
14. **4 pts** Why is it important to take *all* your antibiotics when you are sick? Explain.
15. **4 pts** How do evaporites form? Give two example minerals.

16. **4 pts** If we get snow this week in Iowa, explain the likely cause. How does the process differ from thunderstorms in the summer?
17. **4 pts** Why do we think the Mediterranean Sea was once a desert?
18. **4 pts** How can oxygen isotopes be used to estimate past water temperatures? How does it relate to the isotope dance performed so elegantly in class?
19. **4 pts** Water quality is a big issue in Iowa today. Explain two ways that agriculture affects our streams.
20. **5 pts** What was one review question not used on the test that you prepared for? Answer it.