

ESC 115 Physical Geology

Test 4

Spring, 2011

The first nine questions refer to the slides we will view together in class. Please use the space provided to answer the questions.

1. (4 pts) What are two reasons that gasoline prices are currently so high?
2. (6 pts) What is porosity? What is permeability? What is the surface below which all the pores are saturated with water called, as shown in blue in the figure.
3. (4 pts) What is the source of the irrigation water shown? How are the two figures related?
4. (4 pts) What is a spring? What is an example cause?
5. (6 pts) How do petroleum accumulations form? Give at least three steps.
6. (4 pts) Shown is a salt dome. What are two ways it relates to the events at Lake Peigneur?

14. (6 pts) What are the main processes in soil formation? Sketch and label a typical soil profile in a humid climate. How are a) rainforest and b) desert soil profiles likely to differ?
15. (4 pts) How does coal form?
16. (4 pts) How did the extermination of Haiti's pigs relate to deforestation and soil loss?
17. (6 pts) Sketch a confined aquifer, such as the Bighorn Basin, labelling the recharge and discharge areas, confining layer, and direction of flow. Why is Thermopolis Hot Spring hot?

18. (6 pts) Sketch an unconfined aquifer, such as at my home in Walnut Cove, NC, labelling the recharge and discharge areas, water table, probable spring location, and direction of flow.
19. (5 pts) What was a review question that you prepared for but was not asked. Answer it.
20. (6 pts) What are three ways you think this course could be improved?