

Petroleum Geology AES/TA3820
Written Examination, October 29, 2009

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PLEASE NOTE: The questions should be answered *as concisely as possible* (this is part of the rating – chose keywords where possible). Please mention your name and student number at the top of each sheet. Each question counts equally towards the final score. Each bonus question is good for 5%.

1. Name five conditions required for the formation of a subsurface petroleum reservoir. Rank them by order of importance.
2. What are the four major biomolecule groups of living matter? Describe them briefly.
3. What is carbonization and desoxygenation and where and why do they occur?
4. What is the difference between an oil shale and a source rock? Describe both.
5. Name the two major factors required for a reservoir rock and describe them briefly.
6. Make a cross-section of a combined trap and associated layering and show the possible traps. Explain their origins.
7. Why does the Middle East contain such large quantities of oil reserves?

Bonus questions:

What porosity types did we see in the carbonate sample passed around in the lecture?

How much more conventional oil is left and how much is already used?