

كلية الهندسة
القسم: هندسة نفطية
الزمن : ساعتان ونصف
أستاذ المقرر: أ. عطيه عوينات
رقم الطالب:

جامعة مصراتة
خريف 2015/2014
الامتحان النهائي لمقرر/جيولوجيا نفط واستكشاف (هـ. ن. 303)
تاريخ الامتحان: 2015/03/29
أسم الطالب:

QUESTION ONE.

Fill the gaps:

1. The three basic layers of the Earth are and
2. The earth's crust is composed of three basic rock types and
3. In chemical terms a hydrocarbon is a compound containing the elements and with other materials often contain
4. Crude oils are a complex mixture of organic compounds including different compound classes: and.....
5. Primary migration is while secondary migration is.....
6. Source rock is
7. The main source rock maturation indicators are and
8. Oil is generated at temperatures of° to °C, which are typically found at depths of to km.
9. In the Carbonate reservoirs the porosity is called While in the clastic reservoirs it is called
10. For a trap to be efficient and commercially viable, a large variety of factors have to be considered. These include: 1..... 2
- 3..... 4

QUESTION TWO.

What is Kerogen? Explain the main types of kerogen with a sketch where possible?

QUESTION THREE.

Explain the main conversion steps of the organic matter to the hydrocarbon? What are the main factors influencing the quality of the source rocks and the criteria for a sedimentary rock to be an effective oil source?

QUESTION FOUR.

Explain the main properties required from a rock to be a viable reservoir rock? Explain the major factors affecting the clastic rock permeability?

QUESTION FIVE.

From the two layers model below calculate:

1. The Acoustic Impedance (Z).
2. The Reflection Coefficient (R_c).
3. The Transmission Coefficient (T_c).

