Faculty of Agriculture
Soils Department
Soil and water Program
Academic Year 2015/2016
Second Semester
Third Level (CH)



Final Theory Exam
Organic Matter Chemistry
Code No. Sol 318
Total Mark: 60

Time: 2 Hours
Date: 8/6/2016

The exam consists of one sheet

Please answer all the following questions

- 1- The organic matter is divided into two groups Discuss. (10 marks).
- 2- Explain the classical method to extract humic materials from soil or sediments with drawing. (10 marks).
- 3- Discuss and explain the chemical methods for determining the following functional groups:- (10 marks).
 - a Total acidity

b- Carboxyl groups

c - Total hydroxyl groups

d- Phenolic OH groups

- 4- Identify the E_4 / E_6 ratio of dilute aqueous HA and what is the magnitude of this ratio. (10 marks).
- 5- Indicate what are the functional groups in humic and fulvic acids as shown in infrared (IR) spectra with drawing. (10 marks).
- 6- Compare between the metal complex and metal chelate (10 marks).

With our best wishes

Examiners committee

Prof. Dr. Ahmed A. Taha

Ahmed Abbel Kader .

Dr. Medhat Elseedy

Mediat 6 weeks