Faculty of Agriculture Soils Department Soil and water Program Academic Year 2016 / 2017 Second Semester Third Level (CH)



Final Theory Exam Organic Matter Chemistry Code No. Sol 318

Total Mark: 60 Time: 2 Hours Date: 24/5/2017

## The exam consists of one sheet

## Please answer all the following questions

- 1- What are the uses of organic matter? (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- The organic matter is divided into two groups Discuss. (10 marks).
- 6- Indicate with drawing the absorption spectra of humic substances in the Visible and UV regions. (10 marks).

With our best wishes

**Examiners** committee

Prof. Dr. Ahmed A. Taha

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Dr. Medhat Elseedy

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