**Benha University Under Graduate Exam**

**Fac. of Agric. Chemistry 2**

**Department of Biochemistry**

**Answer the following questions:**

**Question one:**

**Fill in the spaces:**

* **The equation of Saponification test is ………….**
* **We can different between saturated and unsaturated fatty acids by ………….. And equation ……………**

**Question two:**

**The peptide chain:**

**1 2 3 4 5 6 7 8 9**

**NH3+ - Ala – His – Pro – Val – Glu – Tyr – Lys – Ser – Asp –**

**10 11 12 13 14**

**Arg – Gly – Leu – Meth – Asp – COO-**

1. **What is the net charge of this peptide chain in pH (3/7/12)?**
2. **What is the PI of amino acid number (7) (PK1 = 2.09 – PK2 = 9.82 – PKR = 3.86)?**

**Good Luck,,,,**