**AGRICULTURE FORM TWO MARKING SCHEME**

1. Define the term straight fertilizer. (l mark)

**This is a fertilizer that contains only one of the primary**

**macro-nutrients**

2. State four characteristics of nitrogenous fertilizers. (4marks)

**Highly soluble in water**

**- Highly mobile in the soil hence it is applied as a top**

**dress.**

**- No residual effect**

**- Has scorching or burning effect on plants.**

**- Easy to volatilize during hot season.**

**- Are hygroscopic and cake under moist conditions**

**- Corrode the skin as well as metal surfaces.**

3.Methods of fertilizer application

**- Broadcasting**

**- Placement method**

**- Side dressing**

**- Foliar spraying**

**- Drip**

4.How much nitrogen (N) is there in a 500 kg bag of calcium ammonium nitrate (CAN). CAN CONTAINS 21% N.(2MKS)

**=105 KGS**

5.Calculate the 50kg SA fertilizer bags that would be applied in one hectare of land that requires 60 kg of nitrogen per hectare.SA CONTAINS 20% N.(3mks)

**=300KG OF SA**

6a) What is soil sampling. (mark)

**This is the process of taking a small quantity of soil from**

**the field to act as a representative sample of the soil in**

**the particular field.**

b) Identify the methods of sampling shown below.(2marks)

**X - Transverse method**

**Y - Zigzag method**

7. Name five sites that should be avoided during soil

sampling. (5marks)

**- Dead furrows**

**- Terrace stands**

**- Old fence lines**

**- Old manure heaps**

**- Swampy areas**

**- Near trees and boundaries**

**- Between slopes and bottom land**

8 a) Give three reasons for soil testing. (3marks)

**- To determine the value of the soil hence determine the**

**crop to grow.**

**- To determine the nutrient content hence find out the**

**type of fertilizer to apply.**

**- To determine whether it is necessary to modify the soil**

**pH**

b) Name two main methods of pH testing. (2marks)

- **The use of a pH meter**

**- The use of colour indicator dyes**

9. How does soil pH affect crop production? (2marks)

**- Influences the physical and chemical properties of the**

**soil**

**- Affects the availability of nutrients**

**- Influences the incidences of soil borne diseases.**

**- Determine the type of crop to be grown at a given area.**

b) Name the two broad categories of essential elements.

(2marks)

**Macro-nutrients**

**Micro-nutrients**

10.List four examples of the following nutrients

1. macro-nutrients (4marks)

**Carbon, Hydrogen, Nitrogen, Phosphorus, Potassium,**

**Sulphur, Calcium, Magnesium.**

b micro-nutrients (4marks)

**Iron, Manganese, copper, Zinc, Boron, Molybdenum,**

**chlorine**

c.Give three macro-nutrients that are referred to as

1. Fertilizer elements (3marks)

**Nitrogen, phosphorus, potassium**

 b) Liming elements (3marks)

**Calcium, magnesium, Sulphur**

11.State four roles of nitrogen in plants. (4marks)

**Vegetative growth**

**- Chlorophyll formation**

**- Build-up of protoplasm**

**- Improves leaf quality in leafy crops such as tea and**

**cabbages’**