

# KERALA AGRICULTURAL UNIVERSITY

B.Sc Hons (Ag) 2011 Admission  
IV<sup>th</sup> Semester Final Examination- August-2013

Cat. No: Ssac.2204

Marks: 80

Title: Fertilizers & Agro-chemicals (1+1)

Time: 3 hours

## I Answer ALL questions

(10 x 1 = 10)

- Amount of urea required to apply 100 kg of N to rice field is \_\_\_\_\_  
a. 220                      b. 460                      c. 22                      d. 46
- Rock phosphate is converted to single superphosphate by adding \_\_\_\_\_  
a. HCl                      b. H<sub>2</sub>SO<sub>4</sub>                      c. HNO<sub>3</sub>                      d. H<sub>3</sub>PO<sub>3</sub>
- Sulphate of potash contains \_\_\_\_\_ % of K  
a. 50                      b. 40                      c. 55                      d. 45
- Molybdenum availability is plenty in \_\_\_\_\_ pH  
a. Alkaline                      b. Neutral                      c. Acidic                      d. Highly acidic
- Apatites are rich source of \_\_\_\_\_  
a. Calcium                      b. Iron                      c. Zinc                      d. Phosphorous
- Feldspars and Micas provide \_\_\_\_\_ to soil  
a. Nitrogen                      b. Phosphorous                      c. Potassium                      d. Zinc
- Kelp weeds are used as an organic source of potassium (True / False)
- Atrazine is a herbicide recommended for maize and sugarcane (True / False)
- Constituents in Bordeaux mixture are \_\_\_\_\_ and \_\_\_\_\_
- Toxic principle present in neem based pesticide is \_\_\_\_\_

## II Write short notes on any TEN of the following questions

10 x 3 = 30

- Reactions involved in manufacture of urea and ammonium sulphate
- Integrated Plant Nutrient System (IPNS)
- Define straight and complex fertilizers with suitable examples

4. Regulations of Fertilizer Control Order
5. Botanical pesticides (explain any three)
6. Mode of action of atrazine
7. Secondary nutrient supplying fertilizers with suitable examples
8. Residual toxicities of agro-chemicals
9. Chemical structure of organochlorinated pesticides (any two)
10. Chelating compounds and micronutrients availability
11. Use of rock phosphate in agriculture
12. Role of Zinc in crop nutrition

**III Write short essays on any SIX of the following** **6 x 5 = 30**

1. How can N use efficiency be improved in wetlands?
2. Phosphatic fertilizers and their characteristics
3. Use of plant growth regulators in agriculture
4. Sulfur fungicides synthesis and mode of action
5. Management strategies for saline and sodic soils
6. Role of organic manures in nutrient management
7. Classification of herbicides with suitable examples
8. Organic farming in Indian perspectives

**IV Write an essay on any ONE of the following** **1 x 10 = 10**

1. Fertilizer application is indispensable to sustain agricultural productivity. Justify with suitable examples
2. What are insecticides? Write down the classification of insecticides with suitable examples and their chemical structure.