**CHUKA** 



# UNIVERSITY

#### UNIVERSITY EXAMINATIONS

# EXAMINATION FOR THE AWARD OF DEGREE OF DOCTOR OF PHILOSOPHY IN BOTANY

**BOTA 941: ECONOMIC BOTANY** 

STREAMS: PhD (BOTANY)

TIME: 3 HOURS

DAY/DATE: THURSDAY 19/12/2019 2.30 P.M. – 5.30 P.M.

#### **INSTRUCTIONS:**

• Answer any THREE questions.

#### **QUESTION 1**

(a) Discuss the five classes of natural plant products. (10 marks)

(b) Explain the approaches to the analysis of plant-derived natural products. (10 marks)

#### **QUESTION 2**

Discuss the opportunities and challenges for ethno botany in the 21<sup>st</sup> century. (20 marks)

### **QUESTION 3**

Explain how plant essential oils are extracted. (20 marks)

## **QUESTION 4**

Discuss the alternative uses of sugarcane and its byproducts in agro industries. (20 marks)

#### **QUESTION 5**

Discuss the economic importance of algae. (20 marks)