



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2020/2021 ACADEMIC YEAR

THIRD YEAR FIRST SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE AND EDUCATION
SCIENCE**

COURSE CODE: SBT 411

COURSE TITLE: PLANT BIOCHEMISTRY

DATE: 12TH JANUARY 2022 **TIME:** 8.00 -10.00 AM

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over 

KIBU observes ZERO tolerance to examination cheating

QUESTION ONE (30 MARKS)

- a) State and explain the physical and chemical properties of fatty acids and oils
(5 marks)
- b) State the five primary amino acids in nature (5 marks)
- c) Briefly describe the five processes of protein biosynthesis (5 marks)
- d) State and explain five properties of disaccharides (5 marks)
- e) Briefly explain the three types of enzyme cofactors (5 marks)
- f) Highlight the five functions of phenols in plants (5 marks)

QUESTION TWO (20 MARKS)

- a) Discuss the processes of Biological Nitrogen Fixation in plants (14 marks)
- b) Briefly explain three reactions of α -amino acids (6 Marks)

QUESTION THREE (20 MARKS)

State and describe the plant secondary metabolites giving their functions

QUESTION FOUR (20 MARKS)

Identify the enzyme category and give examples of enzymes catalysing specific reactions

QUESTION FIVE (20 MARKS)

Name five plant organic acids and explain their role in Aluminium-tolerance mechanisms by plants.