JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES / SCHOOL OF FOOD AND AGRICULTURAL SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

SECOND YEAR FIRST SEMESTER 2018/2019 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: **SBT 201/ SBI 3225/ AHT 3215**

COURSE TITLE: **GYMNOSPERM AND ANGIOSPERM**

TAXONOMY/ PLANT TAXONOMY AND IDENTIFICATION

EXAM VENUE: **STREAM: (BSC)**

DATE: **EXAM SESSION:**

TIME: 2 HOURS

Instructions:

1. **Answer ALL questions in Section A and Any two questions in Section B**
2. **Candidates are advised not to write on question paper**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room**

SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)

1. Outline the problems encountered in modern methods of plant taxonomy today (3 Marks)
2. Differentiate between Phenetic, phylogenetic and artificial classification systems. (3 Marks)
3. List the key points of the Englerian evolutionary principles that were challenged by Ranalian School? (3 Marks)
4. List the contributions of Theophrastus to present day Plant classification. (3 Marks)
5. Comment on author citation in botanical nomenclature (3 Marks)
6. With illustrations distinguish between a "panicle", "raceme" and "spike" (3 Marks)
7. Elucidate the major areas where current plant taxonomic activities largely concentrate on (3 Marks)
8. a. Explain what a type specimen is. (2 Marks)
   b.Which system is adopted at the herbarium in the National Museums of Kenya for arranging herbarium specimens. (1 Mark)
9. Show how you would distinguish "character states" of a named character. (3 Marks)
10. Illustrate a flower of a typical *Asteraceae* (3 Marks)

SECTION B ESSAY QUESTIONS [40 Marks]

11. Trace the history of plant classification highlighting the milestones of each phase. (20 Marks)
12. Write an easy on the gymnosperm phyla. (20 Marks)
13. Describe the distinguishing characteristics of the families Asteraceae and Fabaceae. (20 Marks)
14. Discuss phylogenetics and cladistics as methods in plant taxonomy (20 marks)