



**UNIVERSITY OF KABIANGA**  
**UNIVERSITY EXAMINATIONS**  
**2016/2017 ACADEMIC YEAR**  
**THIRD YEAR SECOND SEMESTER EXAMINATION**  
**FOR THE DEGREE OF**  
**BACHELOR OF SCIENCE**  
**AND**  
**BACHELOR OF EDUCATION (SCIENCE)**

**COURSE CODE: BOT 310**

**COURSE TITLE: MORPHOGENESIS AND  
DEVELOPMENTAL ANATOMY**

**DATE: 30<sup>TH</sup> AUGUST, 2017 TIME: 8.00 A.M. – 11.00 A.M.**

**INSTRUCTIONS TO CANDIDATES**

- SEE INSIDE

THIS PAPER CONSISTS OF (2) PRINTED PAGES

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SCHOOL BASED

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**UNIVERSITY EXAMINATIONS**  
**SCHOOL BASED 2016/2017 ACADEMIC YEAR**  
**THIRD YEAR SECOND SEMESTER EXAMINATIONS**  
**BOT 310: Morphogenesis and developmental anatomy (Main paper)**

**Time: 1hr**

**SECTION A: Answer ALL questions in this section (30 Marks)**

1. Describe the differences between the following: (4mks)
  - (i) Vascular Cambium and cork cambium
  - (ii) Tracheids and vessels
2. How does the anatomy of root differ from that of a stem in dicots? (4mks)
3. What is tissue culture? Describe its importance in modern science. (4mks)
4. Write short notes on the following (5mks)
  - (i) Shoot apex (5mks)
  - (ii) Root zones (5mks)
5. Define periderm and state its functions in plants. (4mks)
6. Compare the structure and functions of phloem and xylem. (4mks)

**SECTION B: Answer question 7 and any other three questions in this section (40 Marks)**

7. Describe, with suitably labeled diagrams, the development of the embryo in a named dicot. (10 mks)
8. With the aid of well labeled diagrams, describe the process of secondary growth in a dicot root. (10 mks)
9. Discuss the adaptations of hydrophytes to their habitats (10 mks)
10. Describe the process of fertilization in a flower (10mks)
11. Describe the following surface tissues and state their major roles in plants. (10 mks)
  - i) Epidermal tissue
  - ii) Periderm