



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
BIOLOGICAL SCIENCES AND BACHELOR OF EDUCATION SCIENCE WITH IT**

FIRST YEAR FIRST SEMESTER 2018/2019 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: SBI 3111 AND SBT 101
COURSE TITLE: PLANT STRUCTURE AND FUNCTION
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**
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SECTION A: ASHORT NSWER QUESTIONS (30 MARKS)

1. a) Define meristem (1 Mark)
b) Describe the meristem regions that produce the primary plant body. (3 Marks)
2. Distinguish between:
 - a) Tracheid and vessel member (1 Mark)
 - b) Epidermis and periderm (1 Mark)
 - c) Pericycle and endodermis (1 Mark)
3. Describe the root meristems. (3 Marks)
4. Describe any four specific roles that mineral ions play in plant functioning. (4 Marks)
5. Describe the Cohesion-Tension theory. (4 Marks)
6. Describe any three photosynthetic pathways. (3 Marks)
7. Describe the pressure-flow hypothesis. (3 Marks)
8. Describe any three conditions that trigger active transport mechanisms. (3 Marks)
9. Describe any three passive transport mechanisms. (3 Marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

10. Discuss the main energy-releasing pathway in plants. (20 Marks)
11. Discuss membrane transport. (20 Marks)
12. Discuss the different types of seed dormancy. (20 Marks)
13. Discuss transpiration and water absorption in plant. (20 Marks)