



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

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

1st YEAR FIRST SEMESTER 2016/2017 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: SBI 3111
COURSE TITLE: PLANT STRUCTURE AND FUNCTION
EXAM VENUE: STREAM: (BSC BIO)
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: SHORT ANSWER QUESTIONS (30 MARKS)

1. List the components of the cell wall in plants (3 marks)
2. (i) Define osmosis (1 mark)
(ii) Explain the effects of exosmosis in plant cells (2 marks)
3. Describe photorespiration in plants (3 marks)
4. Outline any THREE functions performed by the root system in plants (3 marks)
5. Name the components of stele in a dicot root (3 marks)
6. Describe how the chloroplast is adapted to its functions (3 marks)
7. Describe the androecium in flowering plants (3 marks)
8. Differentiate Prokaryotic cells from Eukaryotic cells giving examples in each case. (3 marks)
9. Provide a fully labeled diagram of the mitochondrion. (3 marks)
10. Draw a well labeled diagram of a mature pollen grain (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. Discuss the carbon reduction reactions of photosynthesis (20 marks)
12. Describe the membrane system in plant cells (20 marks)
13. Discuss the causes of seed dormancy (20 marks)
14. Describe the anatomy of an angiosperm leaf (20 marks)