



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL, PHYSICAL, MATHEMATICS AND ACTUARIAL
SCIENCES

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

2nd YEAR 1st SEMESTER 2022/2023 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: SBB 1206
COURSE TITLE: PLANT PHYSIOLOGY
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: SHORT ANSWER QUESTIONS (30 MARKS)

1. State three reasons why living organisms can't survive without water (3 marks)
2. Distinguish between endosmosis and exosmosis as applied in plant physiology (3 marks)
3. State three differences between osmosis and diffusion (3 marks)
4. Define the term imbibition and state two significance in plants (3 marks)
5. Describe three sources of water for plant use (3 marks)
6. Define the term vernalization and state its importance in plants (3 marks)
7. Explain three channels through which plants are able to lose water to the environment (3 marks)
8. State three structural modifications in plants to enhance adaptation to low water potential condition (3 marks)
9. Based on the principle of photoperiodism, name three ways by which plants are classified (3 marks)
10. Use a simple diagram describe the role of turgor pressure in plants (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. Discuss three theories that governs the opening and closing of stomata (20 marks)
12. Use of relevant examples to describe factors that affect water absorption in plants (20 marks)
13. Discuss the theories which govern the upward movement of plant sap (20 marks)
14. Describe five experiments to explain the role of phloem in translocation of photosynthates (20 marks)