



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF AGRICULTURE AND FOOD SCIENCES**

**SECOND YEAR SECOND SEMESTER UNIVERSITY OF EXAMINATION FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE**

**2017/2018 ACADEMIC YEAR**

**REGULAR**

**Course code: AHT 3226**

**Course title: PLANT PROPAGATION AND NURSERY MANAGEMENT**

**Exam Venue :**

**STREAM: Bsc. HORTICULTURE**

**DATE:**

**EXAM SESSION:**

**TIME: 2 HOURS**

**Instructions**

1. Answer ALL the questions in section A and any TWO 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 (30 MARKS)**

**Answer ALL questions from this section.**

1. (a) What is meant by the term plant propagation. (1mk)  
(b) List two types of plant propagation methods. (2mks)
2. (a) What is clonal propagation. (1mk)  
(b) Outline two advantages of clonal propagation. (2mks)
3. Distinguish between each of the following  
(i) Grafting and Budding. (2mks)  
(ii) Zygotic and Somatic embryogenesis. (1mk)
4. Give three reasons for grafting in fruit trees. (3mks)
5. List three significance of seed dormancy. (3mks)
6. Outline three components of tissue culture media. (3mks)
7. Give three benefits of wounding the cuttings during propagation. (3mks)
8. List three environmental factors that affects seed germination. (3mks)
9. Give three factors considered in nursery site selection. (3mks)
10. Give the classification of cuttings according to the plant from which they are prepared. (3mks)

**SECTION B (40 MARKS)**

**Answer ANY TWO questions from this Section**

11. Discuss dormancy in seeds. (20mks)
12. (a) Define the term nursery in plant propagation. (1mk)  
(b) Discuss the factors to be considered in nursery site selection. (7mks)  
(c) Discuss the 4Ps of marketing nursery plants. (12mks)
13. (a) Explain the following systems of plant regeneration.  
(i) Protoplast culture. (3mks)  
(ii) Embryo rescue culture. (3mks)  
  
(b) Describe the advantages and disadvantages of seed propagation. (8mks)  
(c) Discuss classification of nurseries based on productive type. (6mks)
14. (a) Discuss the factors influencing rooting of cuttings. (12mks)  
(b) Describe the three stages involved in adventitious root formation. (8mks)