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University Examinations 2023/2024

FIRST YEAR SECOND TRIMESTER EXAMINATION FOR THE DIPLOMA IN APPLIED BIOLOGY

SBT 2152: PLANT HUSBANDRY

DATE: APRIL 2024

TIME: 3 HOURS

INSTRUCTIONS

1. This paper has two sections **A** and **B**.
2. You are provided with separate answer booklet.
3. Marks for each question are indicated.
4. **Do not write** on the question paper.

SECTION A

Answer **all** the questions in this section

1. Highlight four environmental factors that influence the germination of the seeds. (4 Marks)
2. Explain any two method of scarification as a way of breaking seed dormancy. (4 Marks)
3. Explain any two ways in which the yields of the crops can be lost. (4 Marks)
4. Explain the term plant hardening and state how it can be accomplished. (4 Marks)
5. Leaf cutting is a method that can be used to asexually propagate plants. Explain any two types of this method available. (4 Marks)
6. Summarize the most common necrotic symptoms on plants caused by fungi. (4 Marks)
7. Outline the qualities of a good germinating media. (4 Marks)
8. Highlight the management practices of bacterial diseases of plants. (4 Marks)
9. Green houses can be of different types based on specific needs they are required to meet. Explain the two types of green houses available based on their utility. (4 Marks)

10. Outline four reasons why garden soil cannot be used to initiate the germination of the seeds. (4 Marks)

SECTION B (60 MARKS)

Answer **any** three questions in this section

11. a) Highlight four conditions that must be met for grafting to be successful. (4 Marks)
- b) Describe the various techniques that one can choose from to propagate plants by grafting. (6 Marks)
- c) Analyze the methods for plant propagation by layering. (10 Marks)
12. a) You want to carry out a tissue culture of a plant that cannot be initiated using other available propagation techniques. Enumerate the materials that you need for the whole process of tissue culture to be successful. (10 Marks)
- b) Explain the procedure involved during the transfer of plant materials to tissue culture media. (10 Marks)
13. a) Describe how ferns are propagated by spores. (10 Marks)
- b) Plants can be asexually propagated by cutting the stems. Explain five techniques that can be employed during stem cutting. (10 Marks)
14. a) Discuss the various types of greenhouse available based on their shapes. (10 Marks)
- b) Green house management involved monitoring of environmental parameters in a green house. Describe the equipments/instrument with the parameters they measure in a greenhouse and the influence of these parameters on the crop. (10 Marks)