

051106T4APB

APPLIED BIOLOGY LEVEL 6

APB/OS/AB/CR/07/6

Carry Out Plant Husbandry

March/April 2026



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL
(TVET CDACC)**

WRITTEN ASSESSMENT

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections: **A** and **B**.
2. Answer **ALL** questions in section A and **ANY THREE** (3) questions in section B.
3. Marks for each question are indicated in the brackets.
4. Candidates are provided with a separate answer booklet
5. Do not write on the question paper.

This paper consists of THREE (3) printed pages

Candidate should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.

SECTION A (40 MARKS)

Answer ALL questions in this section

1. Proper screening is essential in crop production. Identify FOUR physical defects screened out in planting materials. (4 Marks)
2. Dormancy may result from internal factors within the seed or external factors. Distinguish between physical and physiological dormancy. (4 Marks)
3. Poor germination is a common challenge in crop production. Outline FOUR causes of poor germination. (4 Marks)
4. Adequate water supply is vital for successful and uniform seed germination. State FOUR roles of water in seed germination. (4 Marks)
5. Glass greenhouses are designed to provide a controlled environment for growing plants. List FOUR disadvantages of glass greenhouses. (4 Marks)
6. Temperature control in a greenhouse regulates heat levels within the structure. Identify FOUR methods of temperature control in a greenhouse. (4 Marks)
7. Root-knot nematodes are particularly problematic in warm climates. Highlight FOUR visible signs of root-knot nematodes. (4 Marks)
8. Sterilization ensures that both the culture media and plant materials are free from unwanted organisms. State FOUR sterilization methods used in tissue culture. (4 Marks)
9. Tissue culture allows the propagation of plants or cells in a controlled environment. Highlight FOUR advantages of tissue culture. (4 Marks)
10. Yield loss in crops can occur due to a variety of factors. Identify FOUR biotic causes of yield loss in crops. (4 Marks)

SECTION B (60 MARKS)

Answer THREE questions in this section

11. a) Pruning is the deliberate removal of certain parts of a plant. Identify and explain FIVE reasons for pruning horticultural crops. (10 Marks)
- b) Seed dormancy plays an essential role in plant propagation. Describe FIVE methods used to break physical dormancy. (10 Marks)
12. Accurate and timely identification of pathogens in plants is essential for implementing effective control measures.
- a. Explain FIVE diagnostic methods for plant diseases. (10 Marks)
- b. Quarantine is a critical component of plant biosecurity. Outline FIVE quarantine measures in plant disease control. (10 Marks)
13. a) Plant tissue culture is based on the principle that a living plant cell has the ability to develop into a whole plant. Describe FIVE types of plant tissue culture. (10 Marks)
- b) Selecting a suitable site for greenhouse construction is a critical step that directly affects crop growth. Outline FIVE factors considered when selecting a site for greenhouse construction. (10 Marks)
14. a) Assessing crop yield loss is a crucial practice that helps farmers understand the impact of various factors on crop production. Explain FIVE benefits of assessing crop yield loss. (10 Marks)
- b) Gibberellins play a crucial role in regulating various physiological processes. Highlight FIVE agricultural applications of gibberellins. (10 Marks)