



**SECTION A [30 MARKS]**

**Answer all questions in this section.**

1.
  - a) Illustrate the characteristics of quality in fresh produce that influence sorting and grading **(5 Marks)**
  - b) State the primary causes of postharvest spoilage **(5 Marks)**
  - c) How does it influence the respiration rate of climacteric and non-climacteric fruits? Give examples of climacteric and non-climacteric fruits **(5 Marks)**
  - d) Chilling injury and examples of produce susceptible to chilling injury **(5 Marks)**
  - e) What is  $Q_{10}$ ? What are the implications of  $Q_{10} = 1$ ;  $Q_{10} > 1.0$  and  $Q_{10} < 1.0$ ? **(5 Marks)**
  - f) Describe a low-cost cold storage alternative technology that can be used in rural areas without electricity. **(5 Marks)**

**Section B [40 Marks]**

**Answer any TWO questions**

2. Explain in detail the role of ethylene in postharvest technology ripening and storage **(20 Marks)**
3. Describe the cool bot technology **(20 Marks)**
4. You are an extension worker with a bean seed company. The farmers have a bumper harvest and need to store the beans until prices improve. Discuss with the farmers the postharvest management of beans. **(20 Marks)**