

Instructions to candidates

Duration: 01 hour

Number of questions: 03

Mark allocation: 100

Answer any **two** questions.

01. a. What do you mean by the term "**browning**"? (05 mark)
- b. Briefly explain the enzymatic, non-enzymatic and chlorophyll degradation browning reactions. (30 mark)
- c. List **three (3)** actions that can be taken to prevent the browning reactions in fresh cut apple slices. Explain the activities of listed actions. (15 mark)
02. a. i. What is "**homeostasis**"? (05 mark)
- ii. Homeostasis can break down by applying **hurdle concept**. Briefly explain the **synergistic** effect of hurdle concept. (15 mark)
- b. i. List the essential unit operations applicable during the minimal processing of carrot (*Daucas carrota*). (10 mark)
- ii. Briefly describe each of the unit operation you have listed in (b,i). (20 mark)
03. Briefly explain the theory behind the **ten (10)** methods that can be applied to maintain the quality of fresh cut ash banana. (50 mark)

