THE OPEN UNIVERSITY OF SRI LANKA

B.Sc./B. Ed. DEGREE PROGRAMME

BOTANY - LEVEL 05

FINAL EXAMINATION - 2010/2011

BTU3113/BTE5113– POSTHARVEST TECHNOLOGY OF FRESH PRODUCE

DURATION : TWO AND A HALF (02 ½) HOURS.

DATE : 07th July 2011 **TIME: 1.30 p.m. – 4.00. p.m.**

ANSWER ANY FOUR (04) OF THE FOLLOWING QUESTIONS.

01. (a) Differentiate between climacteric fruits and non-climacteric fruits.
(b) Using a graph explain the changes in respiration and ethylene production in these two types of fruits during ripening.
(c) Briefly describe the compositional changes observed in a fruit which has entered the stage of ripening.

02. (a) Explain the necessity of pre-cooling fruits and vegetables.
(b) Briefly describe the simple methods used for pre-cooling of fresh produce.
(c) "Pre-storage cooling is practiced as a post-harvest technology and a disease management strategy of fresh produce". Discuss this statement.

03. (a) Briefly describe the beneficial effects of modified atmosphere packaging to fresh produce.
(b) List the undesirable effects of incompatible film and/or high temperatures in modified atmosphere packaging.
(c) Differentiate between modified atmosphere packaging and controlled atmosphere packaging.

04. (a) What are the major causes of post-harvest losses of fresh produce?
(b) Write briefly on high temperature and chilling injuries of fresh produce.
(c) Discuss the major ways by which post-harvest diseases originate.

05. (a) Explain the term "minimal processing".
(b) Briefly describe the factors which should be considered before using minimal processing technology for food preservation.
(c) How would you minimize the microbial multiplication and browning in minimally processed food?

06. Write short notes on the following.
(a) Specialized post-harvest treatments applied to fresh produce.
(b) Beneficial effects and the antinutritional role of phytochemicals.