



**THE OPEN UNIVERSITY OF SRI LANKA**

**B.Sc. DEGREE PROGRAMME**

**BOTANY – LEVEL 05**

**FINAL EXAMINATION – 2017/2018**

**BOU3108/BYU5308/BYE5308 – POSTHARVEST TECHNOLOGY OF FRESH PRODUCE**

**DURATION: TWO (02) HOURS**

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**Date: 18<sup>th</sup> April 2019**

**Time: 9.30 a.m. – 11.30 a.m.**

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**No. of Questions - 06**

**No. of pages - 02**

**ANSWER ANY FOUR (04) OF THE FOLLOWING QUESTIONS.**

01. (a) list the major classes of nutrients in our diet.  
(b) State the main plant sources of above nutrients and their functions.  
(c) “Lipids from plant sources in the diet are generally considered healthier than that of the ones from animal sources” Discuss this statement.  
(d) What are “functional food”?  
Briefly describe the beneficial effects and antinutritional role of phytochemicals.
02. (a) List the major causes of postharvest loss of fresh produce.  
(b) Describe how the environmental factors could lead to postharvest loss of fresh produce.  
(c) Discuss how to control postharvest diseases using chemical treatments.
03. (a) Indicate what is meant by “maturity index” of a commodity.  
(b) “Harvesting maturity is an integral component of quality”. Comment on this statement.  
(c) Briefly describe the advanced methods of assessment of maturity.

04. (a) List the various methods of pre-cooling of fruits and vegetables.  
(b) State the advantages of pre-cooling.  
(c) Discuss the factors which have to be considered in selecting the most appropriate pre-cooling method for a certain fresh commodity.
05. (a) Explain the term "active packaging technology".  
(b) Briefly describe the different techniques employed in active packaging technology.  
(c) List the undesirable effects of  
    i. incompatible film  
    ii. high temperatures  
    in modified atmosphere packaging.  
(d) What is the advantage of using microperforated films in modified atmosphere packaging?
06. Write short notes on the following.  
(a) Inbuilt systems of self-defense present in plants.  
(b) Role of ethylene in ripening and storage of fresh produce.

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