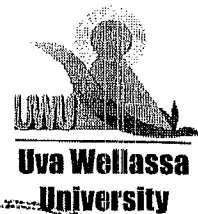


**Uva Wellassa University of Sri Lanka**  
**Faculty of Science and Technology**  
**Department of Science & Technology**  
**300 level 2<sup>nd</sup> Semester Examination –December/ January 2017**  
**SCT 314 -3 Cereal Science & Technology**



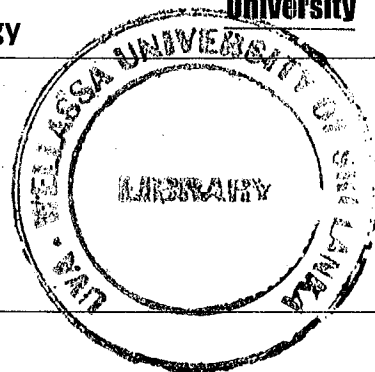
**Instructions to candidates**

**Duration:** 03 hours

**Number of questions:** 06 Essay questions

**Mark allocation:** 100

**Answer all questions**



1.
  - a. What are the importance of cereals? (02 marks)
  - b. Write the classification of grains giving suitable examples. (04 marks)
  - c. Discuss the differences between rice and finger millet grains. (02 marks)
  - d. Describe the physical and chemical quality parameters of milled rice. (08 marks)
  
2.
  - a. What is meant by rice parboiling? (02 marks)
  - b. Describe the advantages and disadvantages of parboiling rice. (05 marks)
  - c. Explain the process of parboiled rice manufacturing starting from the harvesting up to commercialization. (10 marks)
  
3.
  - a. What is glycemic index? (02 mark)
  - b. How can you measure the glycemic index? (03 marks)
  - c. Discuss the benefits of eating foods based on the glycemic index. (05 marks)
  
4.
  - a. Explain the role of moisture in maintaining quality of grain during storage and how the high moisture content would affect value addition process of the final product. (04 marks)
  - b. Discribe the three different methods of grain drying. (06 marks)
  - c. What are the factors to be considered, measured and controlled before storing cereal food products for future use? (08 marks)

(13) ○

5.

- a. Briefly explain the process of manufacturing RDB oil. (05 marks)
- b. Define the processes of Winterization, Hydrogenation and Plasticizing of fat. (03 marks)
- c.
  - i. Draw the flow diagram for the production of virgin coconut oil. (05 marks)
  - ii. Discuss the benefits of using virgin coconut oil. (04 marks)

6.

- a. What are the differences between hard wheat and soft wheat? (01 mark)
- b. Discuss the differences in straight dough, sponge and no knead of bread manufacturing methods. (06 marks)
- c. Write short notes on the following:
  - i. Bread staling process
  - ii. Baking of bread
  - iii. Bread kneading
  - iv. Modern equipment for bakery product quality analysis
  - v. Current trends in bakery industry (15 marks)