

Instructions to candidates

Duration: 03 hours

Number of questions: 06

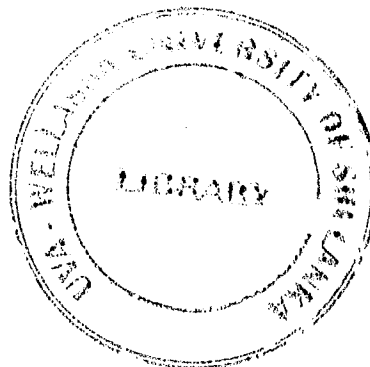
Mark allocation: 100

Answer all questions

1.
 - a. Draw the basic structure of rice grain. (03 mark)
 - b. List factors responsible for the deterioration of the quality of cereals. (02 mark)
 - c. Briefly explain the quality characteristics that are determined in milled rice. (10 mark)

2.
 - a. Explain the activity of destoner in cereal processing. (05 mark)
 - b. What are the advantages of bran removal of grains in the bakery industry? (05 mark)
 - c. Describe the different types of parboiling methods using suitable diagrams. (10 mark)

3.
 - a. Briefly explain the factors that need to be considered during the grain storage. (06 mark)
 - b. Discuss the wet milling process of corn. (04 mark)
 - c. Determine the below mentioned properties, if the dry bulb temperature is at 30 °C and wet bulb temperature at 15 °C using the given psychrometric chart.
 - i. Humidity ratio
 - ii. Dew point temperature
 - iii. Relative humidity
 - iv. Enthalpy
 - v. Specific volume(10 mark)



4.

a.

- i. What are the differences between soft wheat and hard wheat? (01 mark)
- ii. Draw the wheat calendar indicating the product range. (03 mark)
- b. Briefly explain the functions of bakery ingredients. (05 mark)
- c. Discuss the differences between straight dough method, sponge method and no knead method. (06 mark)

5.

- a. List the functions of Farinograph, Amylograph and Extensograph in the bakery industry. (06 mark)
- b.
 - i. Describe the bread staling process using suitable diagrams. (04 mark)
 - ii. Briefly explain the anti-staling methods that can be used in the bakery industry. (10 mark)

6. Write short notes on followings.

- a. Baking process
- b. Oven spring
- c. Importance of gluten protein in the bakery industry
- d. Leavening agents
- e. Bread spoilage (10 mark)