Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2014/2015

COURSE NAME	:	FOOD PROCESSING TECHNOLOGY II
COURSE CODE	:	BWD 30203
PROGRAMME	:	3 BWD
EXAMINATION DATE	:	DECEMBER 2014/JANUARY 2015
DURATION	:	3 HOURS
INSTRUCTION	:	1. ANSWER **ALL** QUESTIONS IN SECTION A 2. ANSWER **ONE (1)** QUESTION ONLY IN SECTION B

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

SECTION A

Q1 (a) The deterioration of food depends on the type of food. It may be slow or rapid rendering the food spoiled within a few hours. Describe TWO groups of foods based on their ease of spoilage and give an example of a food for each group.

(2 marks)

(b) What is the relationship between water activity and lipid oxidation in potato chips?

(4 marks)

(c) You just received a complaint from a customer regarding soy sauce product manufactured by your company. The customer claimed that he found a dead lizard in a newly opened soy sauce bottle. Why do you think the dead lizard can be in the soy sauce bottle?

(8 marks)

(d) As a quality control executive, propose how to prevent contaminated fried chicken in a fast food restaurant.

(6 marks)

Q2 You propose your company to produce guava juice to make its fresh taste and nutritive value available throughout the year, as well as avoid the post-harvest wastage. The managing director ask you to concern the following matters.

(a) What would result if the guava juice is left at room temperature?

(4 marks)

(b) Investigate the possible causes of the guava juice spoilage.

(6 marks)

(c) The guava juice is going to be exported to Germany. However, the costs of transportation and storage are high due to the requirement of refrigeration. Propose appropriate strategies to reduce the costs of transportation and storage of guava juice.

(4 marks)

(d) Can you make a distinction between the membrane process and evaporation in the preserved guava juice manufacture?

(6 marks)

Q3 (a) Microwave has been successfully used to heat, dry and sterilize many food products. Define THREE factors affecting the microwave heating.

(3 marks)

(b) The current and potential uses of microwave heating in the food industry are many and are of growing importance. Describe, with relevant examples, the application of microwave heating for baking, blanching, precooking, puffing and sterilizing.

(5 marks)

(c) Irradiation is used as a means of destroying mold spores which may be present on the surfaces of bread. How does the bread could be preserved by irradiation?

(6 marks)

(d) Compare the effects of using microwave and conventional heating on beef steak.

(6 marks)

Q4 (a) Identify THREE food additives which are specially added to prevent the deterioration or decomposition of a food.

(3 marks)

(b) If a coating of an apple is too thick, anaerobic fermentation can occur because the internal oxygen concentration is below a desirable level and there is an associated increased carbon dioxide concentration which is above a critical tolerable level. Describe how these conditions can be remedied?

(5 marks)

(c) Besides adding taste, salt also acts as a food preservative. How does salt act as a food preservative?

(6 marks)

(d) Can you make distinctions between the pickled and fermented cucumber?

(6 marks)

SECTION B

Q5 A fresh pineapple can be sliced into rings or chunks. However, the sliced pineapples should be eaten rather early before they deteriorate in wholesomeness, nutritional value and taste.

(a) How the pineapple could be preserved to extend its shelf life?

(4 marks)

(b) Propose other suitable preservation process to extend its shelf life.

(4 marks)

(c) Differentiate between the preservation methods discussed in part (a) and (b).

(8 marks)

(d) Justify either the preservation method discussed in part (a) or (b) is the best method to extend the shelf life of the sliced pineapples.

(4 marks)

Q6 A cleaned catfish should be kept alive or preserved quickly to avoid spoilage.

(a) How the cleaned catfish could be preserved to extend its shelf life?

(4 marks)

(b) Propose other suitable preservation process to extend its shelf life.

(4 marks)

(c) Differentiate between the preservation methods discussed in part (a) and (b).

(8 marks)

(d) Justify either the preservation method discussed in part (a) or (b) is the best method to extend the shelf life of the cleaned catfish.

(4 marks)

- END OF QUESTION –