



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2019/2020**

COURSE NAME : MILK AND DAIRY PRODUCT TECHNOLOGY
COURSE CODE : BWD 40603
PROGRAMME : BWD
EXAMINATION DATE : DECEMBER 2019 / JANUARY 2020
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

- Q1** Milk is a whitish liquid that is produced by the mammary glands of all mature cow female to nourish their young for a period beginning immediately after birth
- (a) List **FOUR (4)** main composition of milk. (4 marks)
 - (b) Sketch and describe molecular components in milk. (8 marks)
 - (c) Compare and contrast between cream and butter. (8 marks)
- Q2** The synthesis of milk components occurs for the greater part in the secretory cells of the mammary gland.
- (a) Describe the digestive system of ruminant animals. (8 marks)
 - (b) Discuss how triglyceride is synthesized in ruminant cells. (12 marks)
- Q3** Homogenization is the process of converting two immiscible liquids into an emulsion.
- (a) Explain **FOUR (4)** importance of homogenization in dairy processing. (8 marks)
 - (b) Illustrate and describe how the emulsion occurs during homogenization. (12 marks)
- Q4** Ice cream is one of the most common dairy products produced in dairy industry. Outline the process involved in the production of ice cream to ensure the accuracy of its physical properties. (20 marks)
- Q5** Hygienic processing is crucial step in dairy industry to ensure milk are produced in good quality.
- (a) Explain how hygiene can be determined during the transport process. (6 marks)

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- (b) Mr. Hezri plans to open a dairy company in Pagoh. He expects to produce high quality milk products and meet the customers demand. As a food technologist, suggest and justify the appropriate hygiene control steps to take before he starts the production.

(14 marks)

- END OF QUESTIONS -

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